

T-39-11

2SK687

查询 2SK687 供应商



2052A

N-Channel MOS
Silicon Field-Effect Transistor

High Speed Power Switching Applications

©2464A

Features

Low-on resistance, very high-speed switching, converters

Absolute Maximum Ratings at Ta=25°C

			unit
Drain to Source Voltage	V_{DS}	60	V
Gate to Source Voltage	V_{GS}	± 20	V
Drain Current (DC)	I_D	10	A
Peak Drain Current (Pulse)	$I_{D peak}$	15	A
Allowable Power Dissipation	P_D	60	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

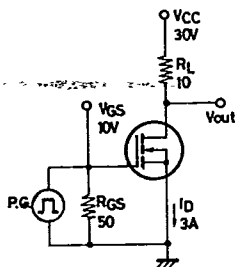
$T_C=25^\circ C$

Electrical Characteristics at Ta=25°C

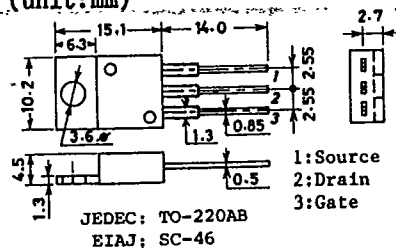
			min	typ	max	unit
D-S Breakdown Voltage	V_{DSS}	$I_D=1mA, V_{GS}=0$	60			V
Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0$			100	uA
G-S Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.5		4.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=5A$	2.5	3.5		S
Saturation Resistance	$r_{DS(on)}$	$I_D=5A, V_{GS}=10V$		0.12	0.18	ohm
Input Capacitance	c_{iss}	$V_{DS}=20V, f=1MHz$		700		pF
Output Capacitance	c_{oss}	$V_{DS}=20V, f=1MHz$		400		pF
Reverse Transfer Capacitance	c_{rss}	$V_{DS}=20V, f=1MHz$		130		pF
Turn-on Time	t_{on}	$I_D=3A, V_{GS}=10V$		70		ns
Turn-off Time	t_{off}	$I_D=3A, V_{GS}=10V$		95		ns

Note: Be careful in handling the 2SK687 because it has no protect diode between gate and source.

Switching Time Test Circuit



Case Outline 2052A (unit:mm)

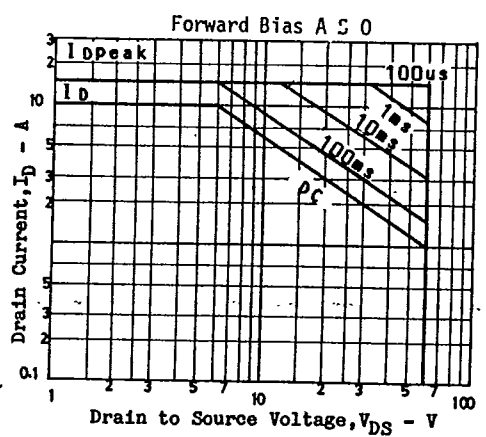
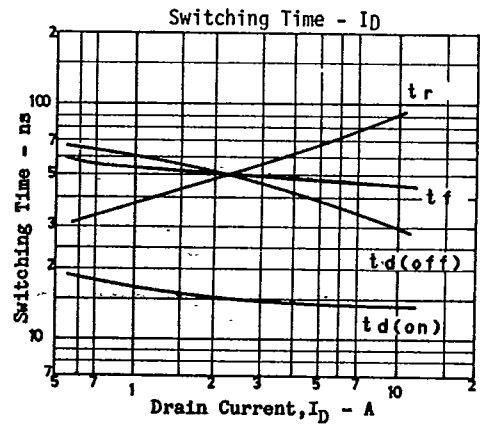
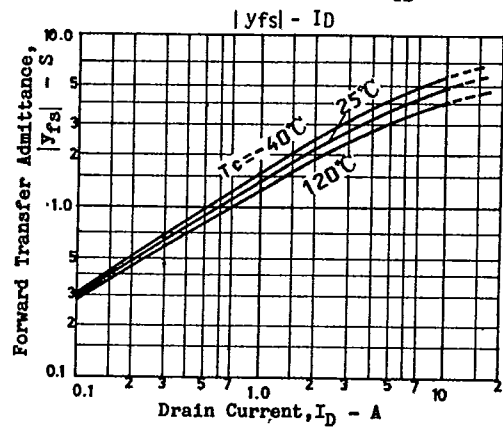
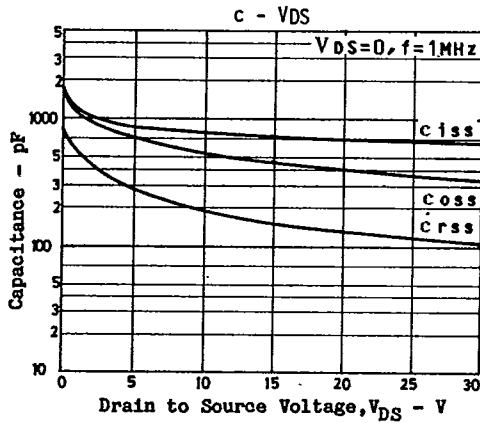
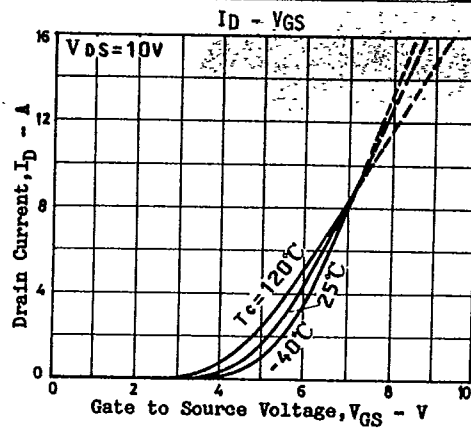
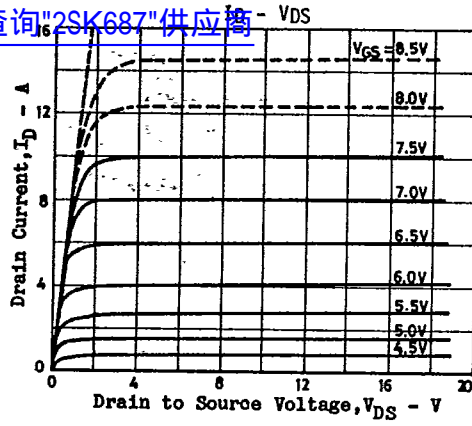


1:Source
2:Drain
3:Gate

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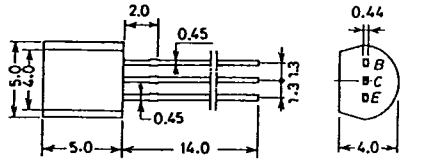
CASE OUTLINES AND ATTACHMENTS

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- All of Sanyo Transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

Case Outline-[2003A]

unit:mm

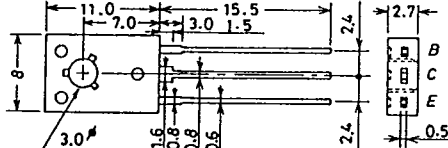


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

B: Base
C: Collector
E: Emitter

Case Outline-[2009A]

unit:mm

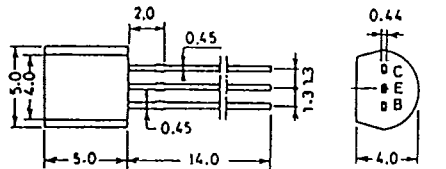


JEDEC: TO-126

B: Base
C: Collector
E: Emitter

Case Outline-[2004A]

unit:mm

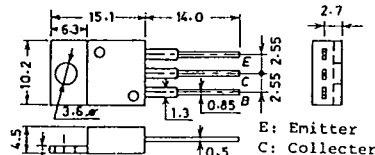


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

C: Collector
E: Emitter
B: Base

Case Outline-[2010A]

unit:mm

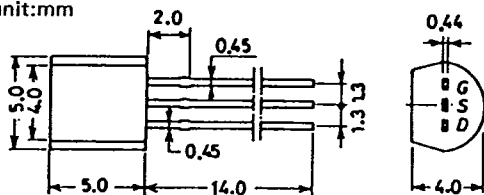


JEDEC: TO-220AB
EIAJ: SC-46

E: Emitter
C: Collector
B: Base

Case Outline-[2005A]

unit:mm

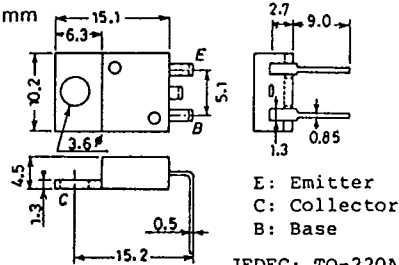


JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

G: Gate
S: Source
D: Drain

Case Outline-[2012]

unit:mm

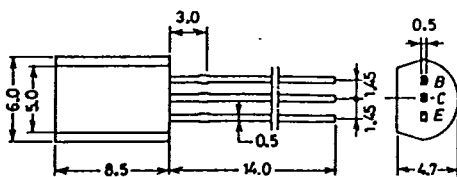


JEDEC: TO-220AA
EIAJ: SC-45

E: Emitter
C: Collector
B: Base

Case Outline-[2006A]

unit:mm

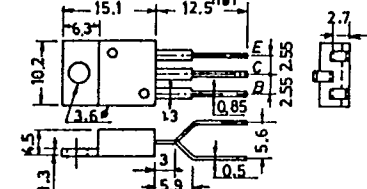


EIAJ: SC-51
SANYO: MP

B: Base
C: Collector
E: Emitter

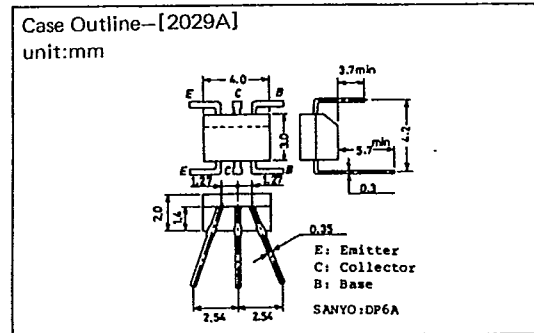
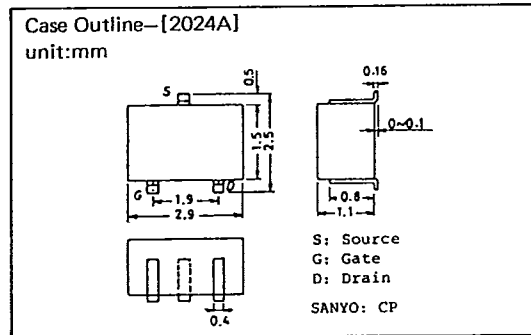
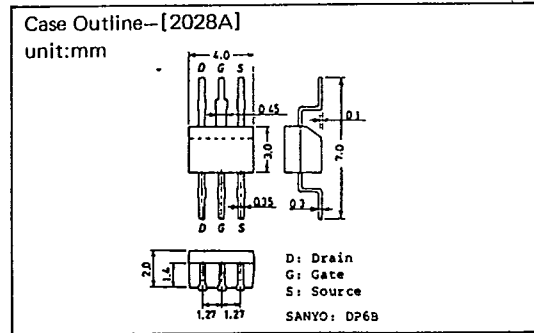
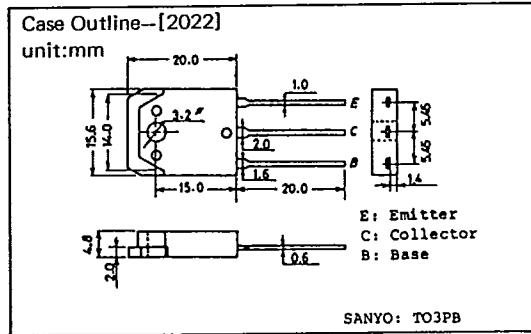
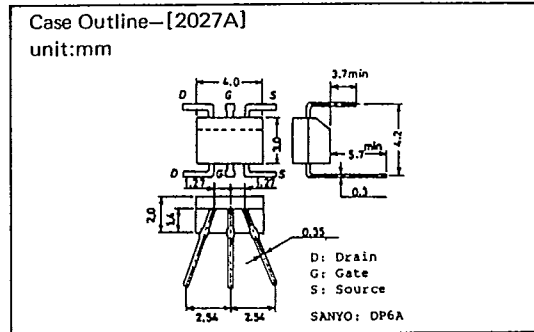
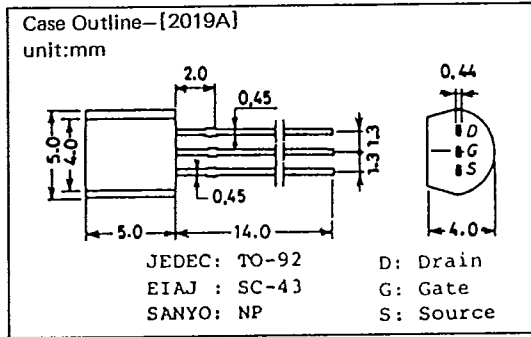
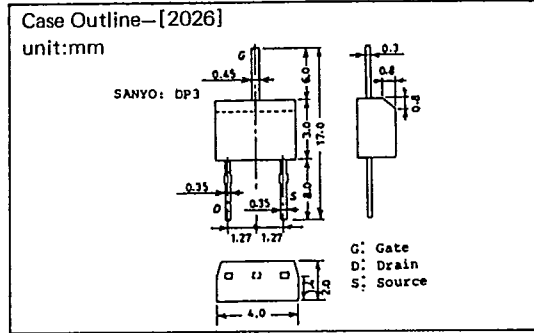
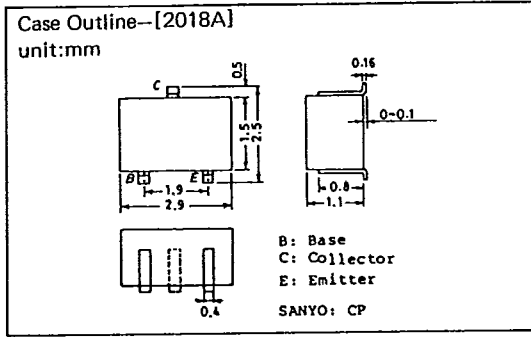
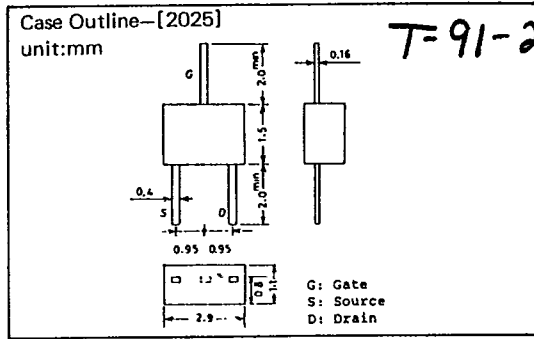
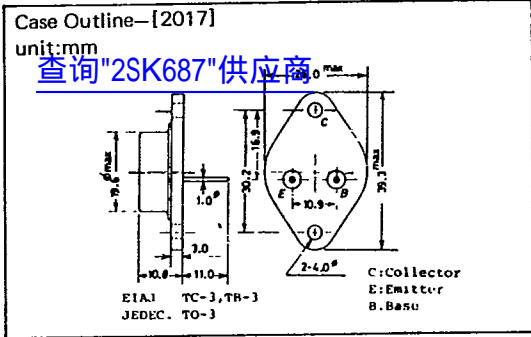
Case Outline-[2013]

unit:mm



JEDEC TO-220

B: Base
C: Collector
E: Emitter

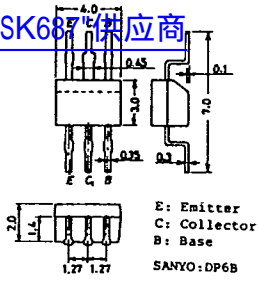


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Case Outline-[2030A]

unit:mm

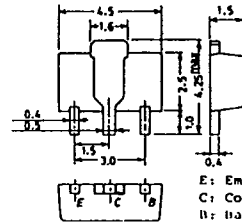
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E: Emitter
C: Collector
B: Base
SANYO: DP6B

Case Outline-[2038]

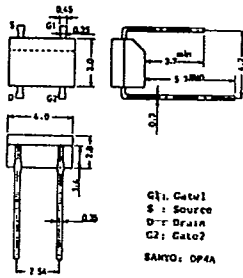
unit:mm



E: Emitter
C: Collector
B: Base
SANYO: PCI'

Case Outline-[2031A]

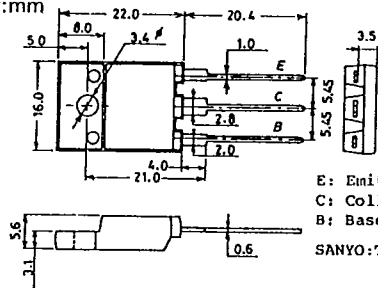
unit:mm



G1: Gate1
S: Source
D: Drain
G2: Gate2
SANYO: DP4A

Case Outline-[2039]

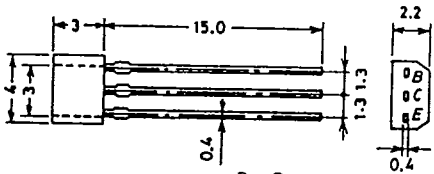
unit:mm



E: Emitter
C: Collector
B: Base
SANYO: TO3PML

Case Outline-[2033]

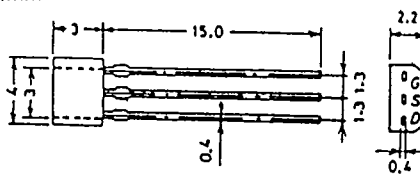
unit:mm



B: Base
C: Collector
E: Emitter
SANYO: SPA

Case Outline-[2040]

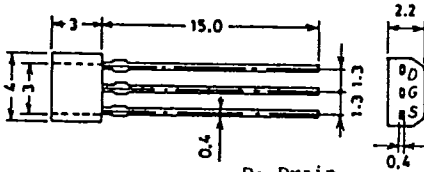
unit:mm



G: Gate
S: Source
D: Drain
SANYO: SPA

Case Outline-[2034]

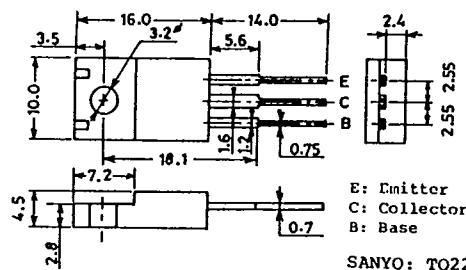
unit:mm



D: Drain
G: Gate
S: Source
SANYO: SPA

Case Outline-[2041]

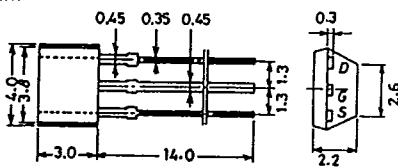
unit:mm



E: Emitter
C: Collector
B: Base
SANYO: TO220ML

Case Outline-[2037]

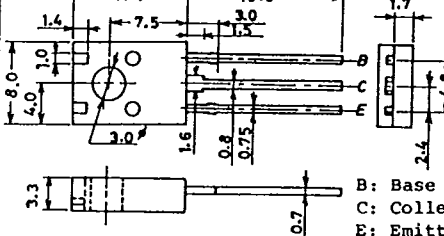
unit:mm



D: Drain
G: Gate
S: Source
SANYO: SP'

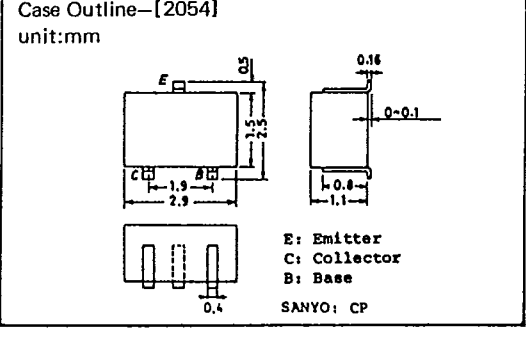
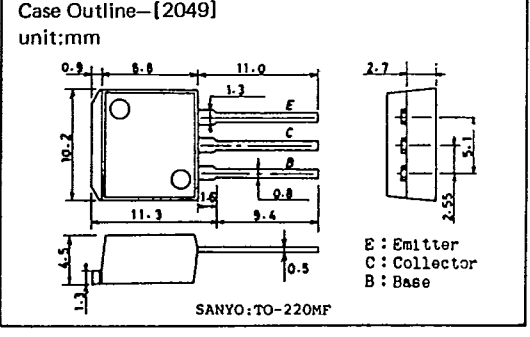
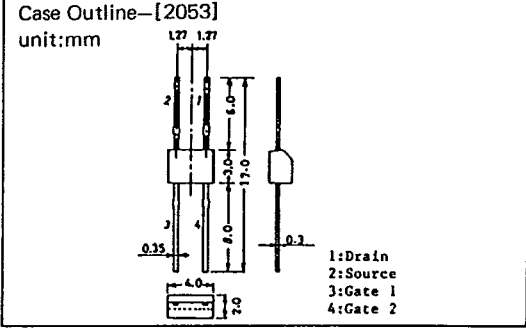
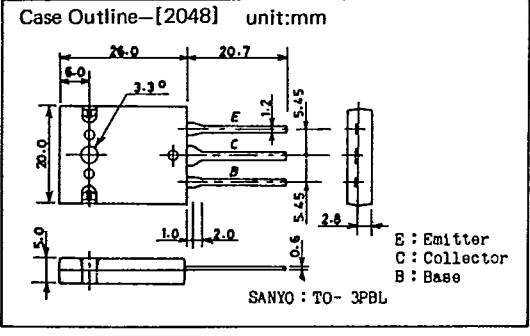
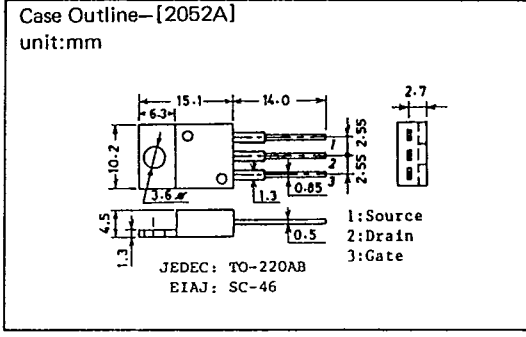
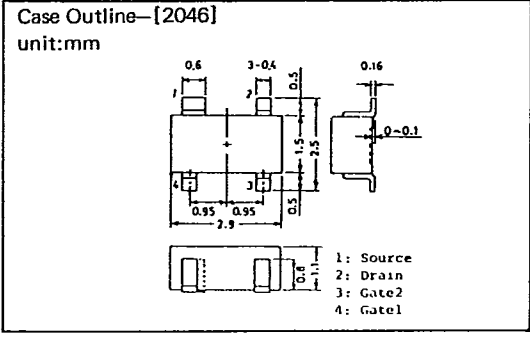
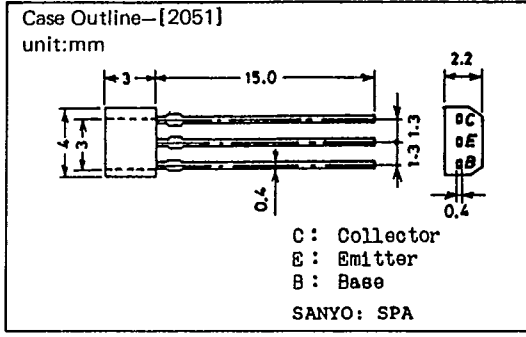
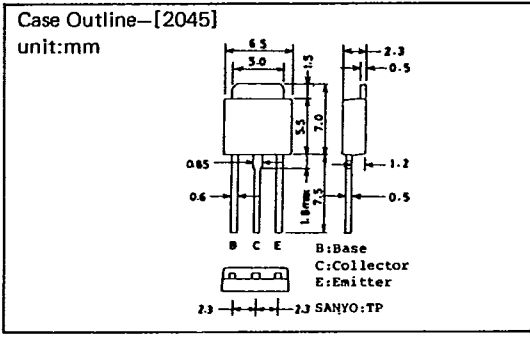
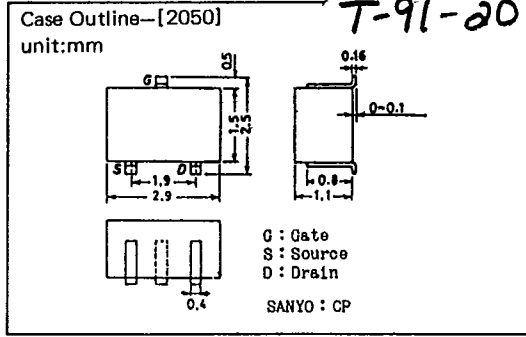
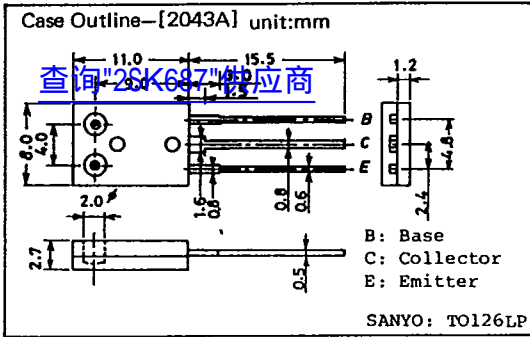
Case Outline-[2042A]

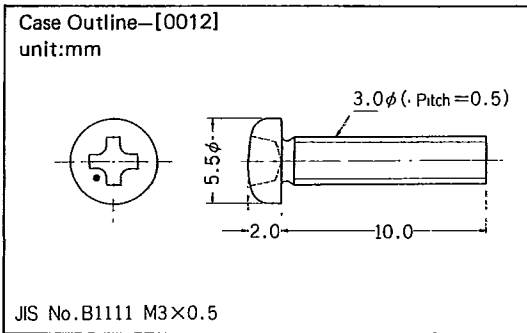
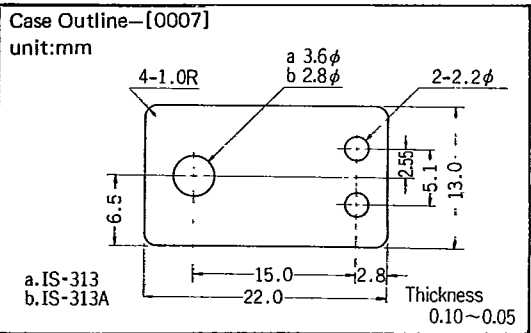
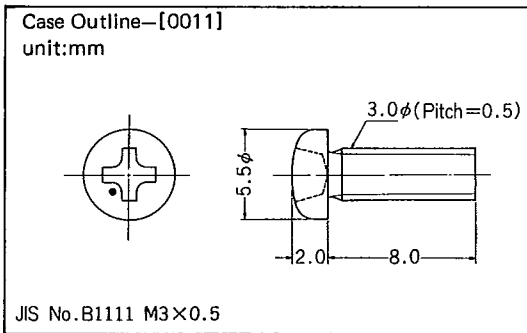
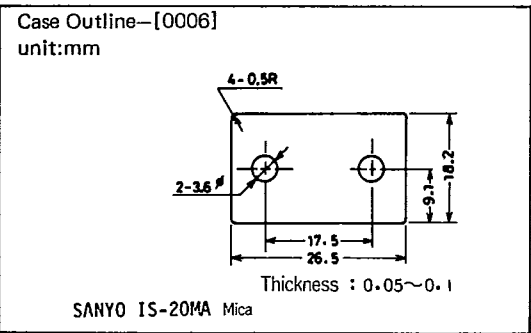
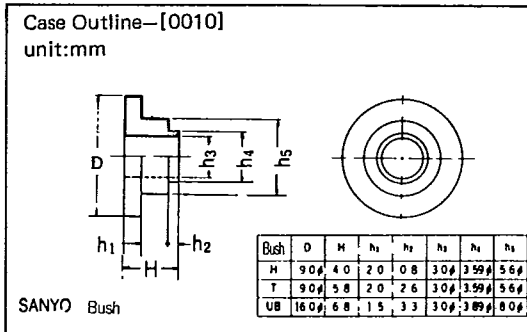
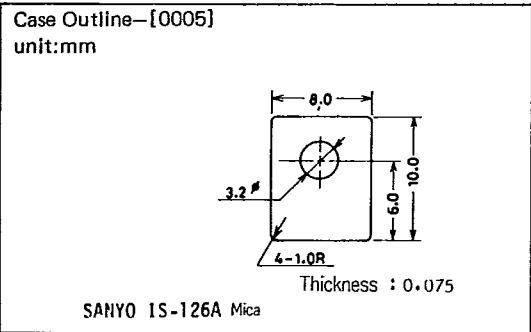
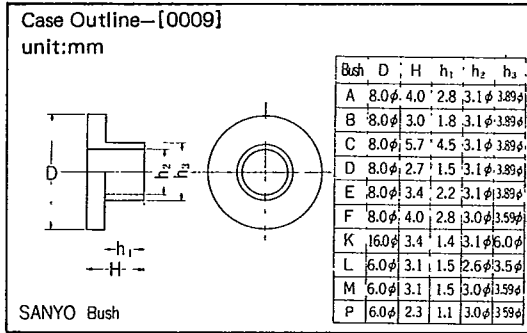
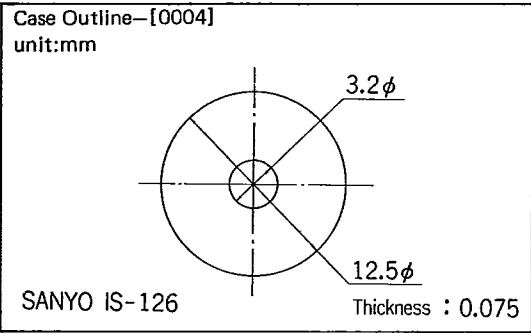
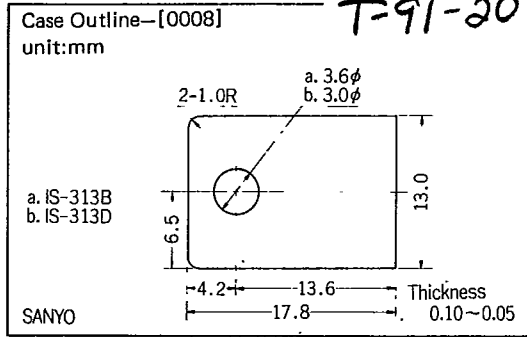
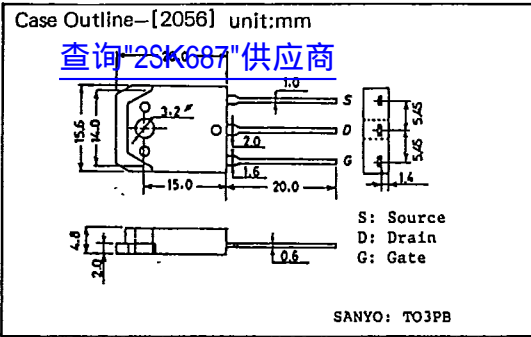
unit:mm



B: Base
C: Collector
E: Emitter
SANYO: TO126ML

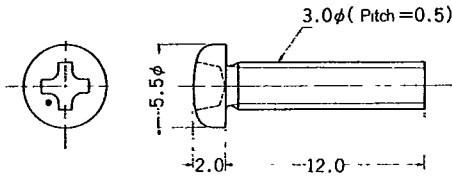
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Case Outline-[0013]

unit:mm
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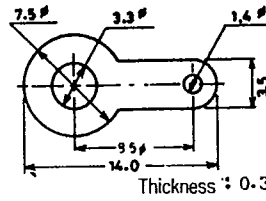


JIS No. B1111 M3×0.5

Case Outline-[0018]

unit:mm

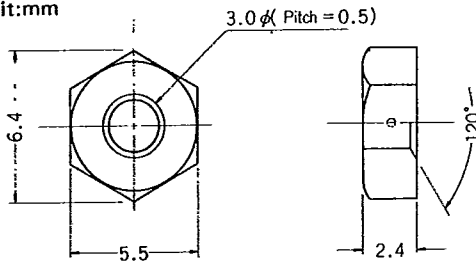
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SANYO Lug 1.4

Case Outline-[0014]

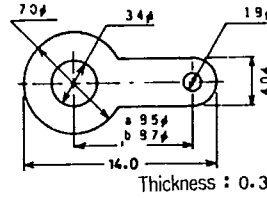
unit:mm



JIS No. B1181 M3×0.5

Case Outline-[0019]

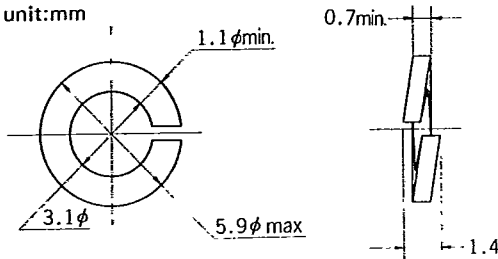
unit:mm



SANYO Lug 1.8φ

Case Outline-[0015]

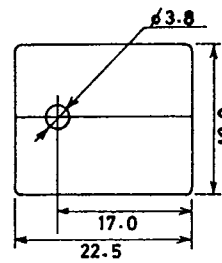
unit:mm



JIS No. B 1251 Spring washer (M3)

Case Outline-[0020]

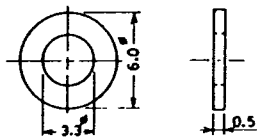
unit:mm



SANYO IS-3MP Mica

Case Outline-[0016]

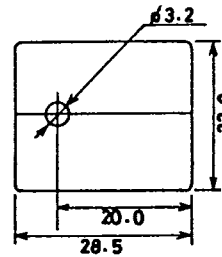
unit:mm



JIS No. B1252 Flat washer

Case Outline-[0021]

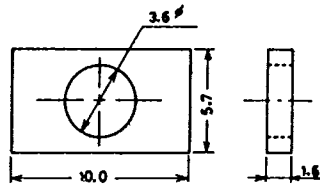
unit:mm



SANYO IS-MPC Mica

Case Outline-[0017]

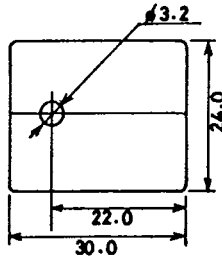
unit:mm



JIS No. G3141 Rectangular washer

Case Outline-[0022]

unit:mm



SANYO IS-3PBL Mica