Ordering number : ENN6988A

SANYO Semiconductors

DATA SHEET

2SA2063 / 2SC5775

PNP Epitaxial Planar Silicon Transistor
NPN Triple Diffused Planar Silicon Transistor

160V / 12A, AF90W Output Applications

Features

- Large current capacitance.
- Wide ASO and high durability against breakdown.
- Adoption of MBIT process.

Specifications Note*( ) : 2SA2063

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)180	V
Collector-to-Emitter Voltage	V_{CEO}		(-)160	V
Emitter-to-Base Voltage	V_{EBO}		(-)6	V
Collector Current	I_C		(-)12	A
Collector Current (Pulse)	I_{CP}		(-)24	A
Collector Dissipation	P_C		2.5	W
		Tc=25°C	130	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)180V, I_E=0			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)0.1	mA
DC Current Gain	$h_{FE}(1)$	V_{CE}=(-)5V, I_C=(-)1A	60		160	
	$h_{FE}(2)$	V_{CE}=(-)5V, I_C=(-)6A	35			
Gain-Bandwidth Product	f_T	V_{CE}=(-)5V, I_C=(-)1A		(10)15		MHz
Output Capacitance	Cob	V_{CB}=(-)10V, f=1MHz		(340)170		pF
Base-to-Emitter Voltage	V_{BE}	V_{CE}=(-)5V, I_C=(-)6A			1.5	V
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=(-)6A, I_B=(-)0.6A		(-0.3)0.2	(-)2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)5mA, I_E=0	(-)180			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)50mA, R_{BE}=∞	(-)160			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(-)5mA, I_C=0	(-)6			V
Turn-On Time	t_{on}	See specified test circuit.		(0.45)0.56		µs
Storage Time	t_{stg}	See specified test circuit.		(1.75)3.3		µs
Fall Time	t_f	See specified test circuit.		(0.25)0.4		µs

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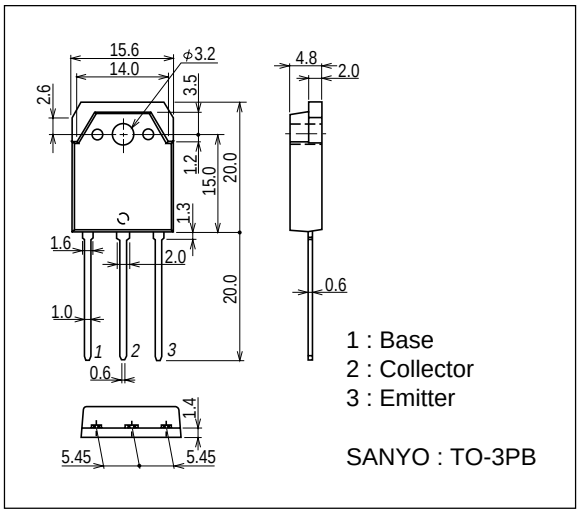
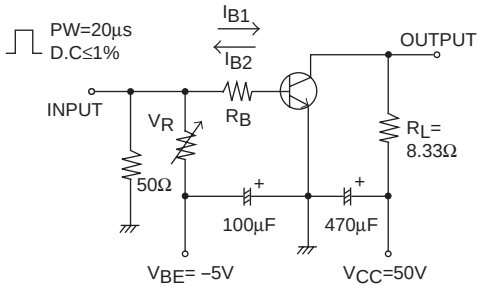
Package Dimensions

unit : mm

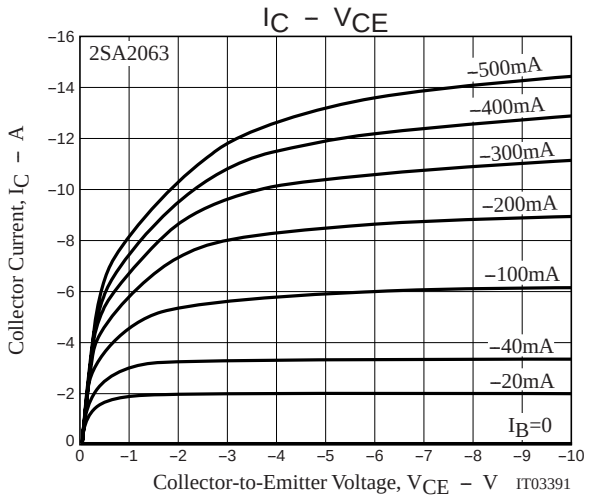
2022A

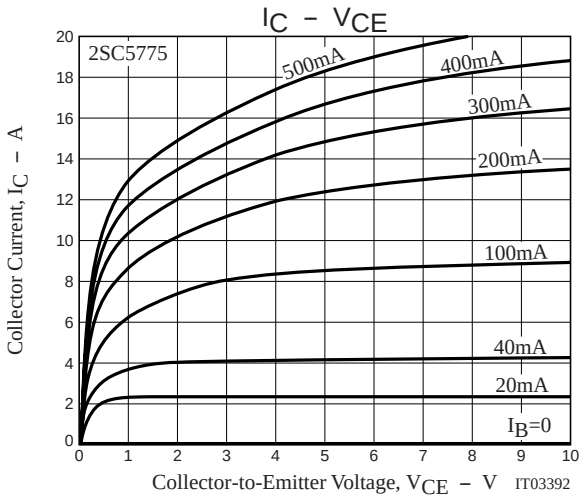


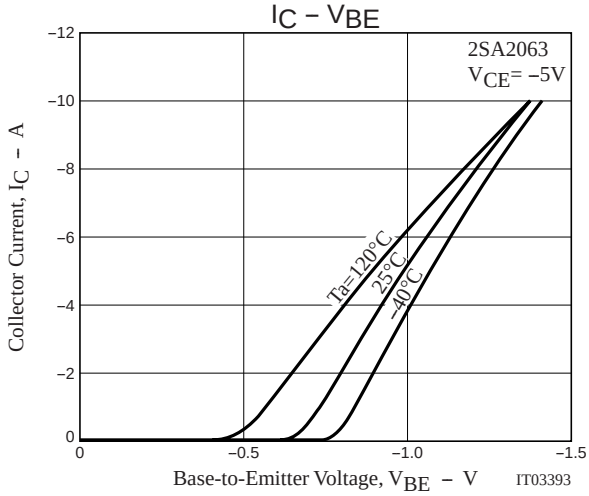
Switching Time Test Circuit

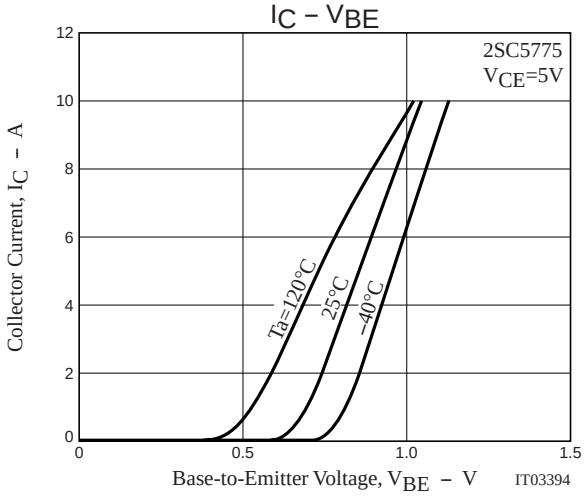


I_C=10I_{B1}= −10I_{B2}=6A
For PNP, the polarity is reversed.

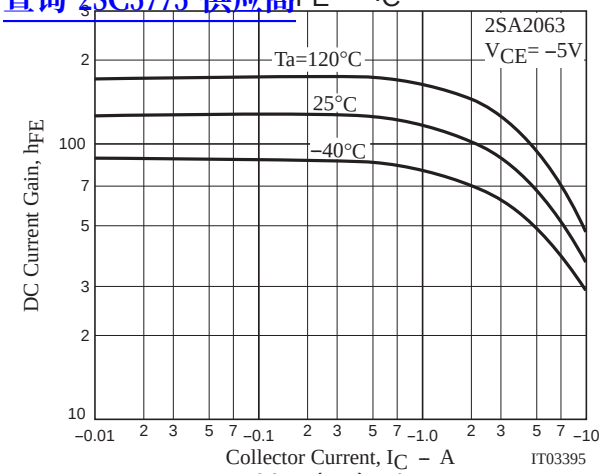




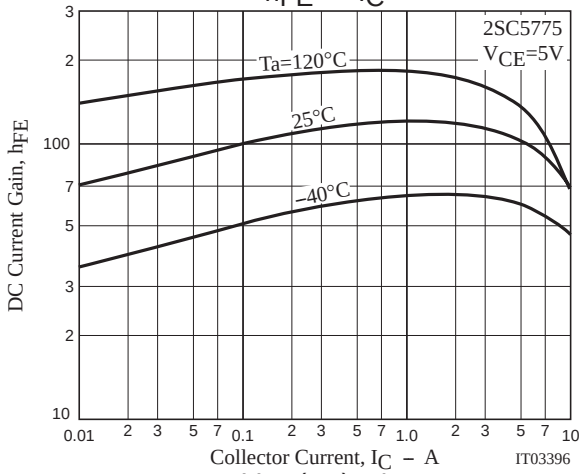




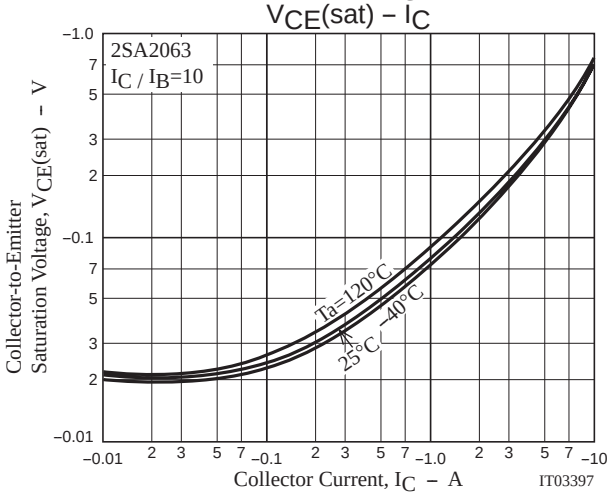
h_{FE} – I_C



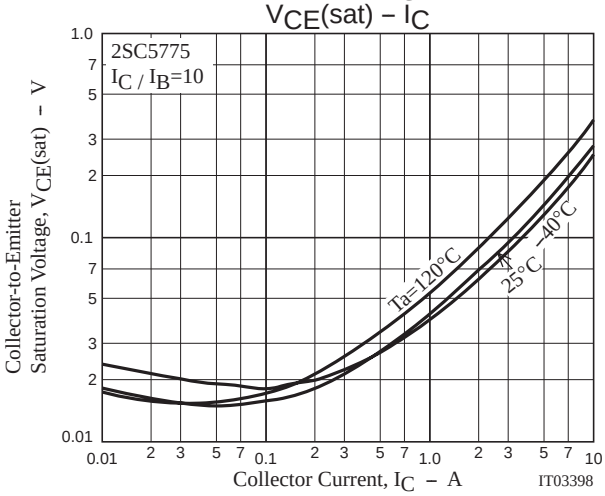
h_{FE} – I_C



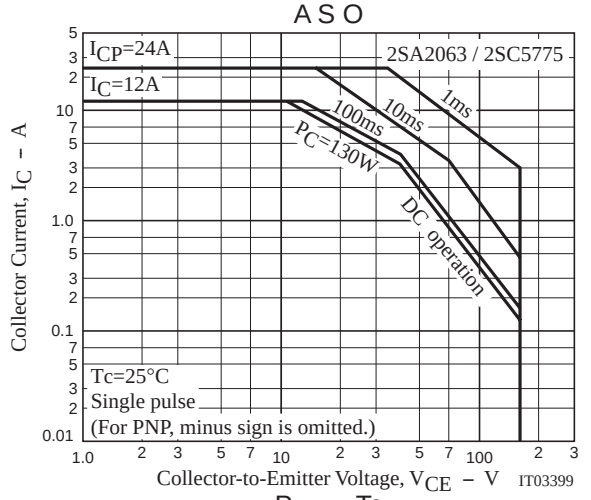
$V_{CE}(sat)$ – I_C



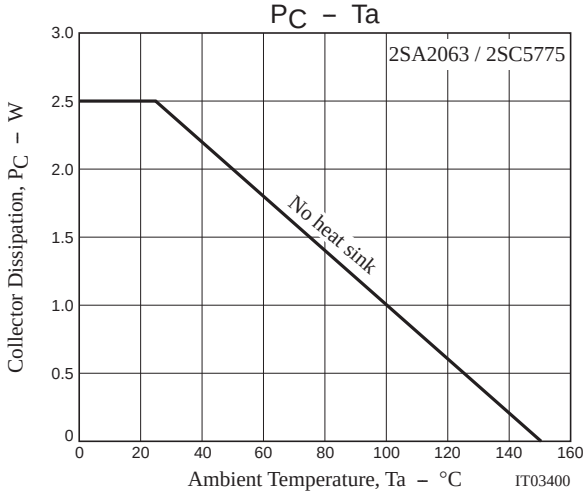
$V_{CE}(sat)$ – I_C



A S O



P_C – Ta



P_C – Tc