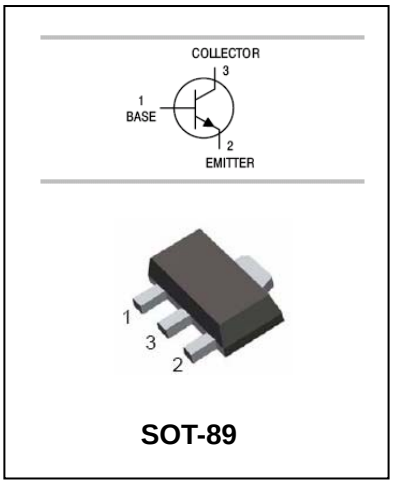
NPN Epitaxial Transistor **2SC5785**

FEATURES

Lead-free

- High DC current gain.
- Low collector-emitter saruration voltage.
- High speed switching.



SOT-89

APPLICATIONS

- High-speed switching applications.
- DC-DC converter applications.
- Strobe applications.

ORDERING INFORMATION

Type No.	Marking	Package Code
2S5785	3E	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**		**Value**	**Units**
V_{CBO}	Collector-Base Voltage		20	V
V_{CEO}	Collector-Emitter Voltage		10	V
V_{EBO}	Emitter-Base Voltage		7	V
I_C	Collector Current	DC	2	A
I_{CP}		Pulse	3.5	A
I_B	Base Current		200	mA
P_C	Collector Power Dissipation	t=10s	2	mW
		DC	1	
T_j, T_{stg}	Junction and Storage Temperature		-55 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	**Symbol**	**Test conditions**	**MIN**	**TYP**	**MAX**	**UNIT**
Collector cut-off current	I_{CBO}	V_{CB}=50V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=2V,I_C=500mA	70		240	
		V_{CE}=2V,I_C=2A	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A, I_B=50mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=1A, I_B=50mA			1.2	mV
Transition frequency	f_T	V_{CE}=2V,I_c=0.5A f=100MHz		120		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0,f=1MHz		40		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	Y
Range	82-180	120-270	180-390
MARKING	P1766	Q1766	Y1766

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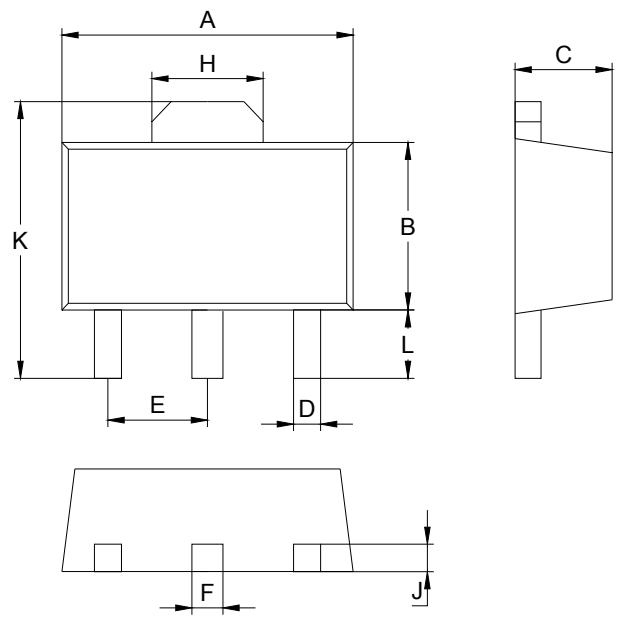
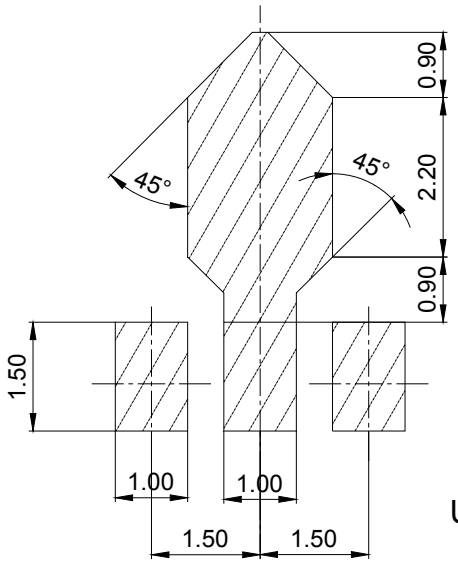
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.50 Typical	
D	0.40 Typical	
E	1.40	1.60
F	0.48 Typical	
H	1.60	1.80
J	0.40 Typical	
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
2SC1766	SOT-89	1000/Tape&Reel