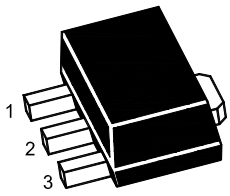
ST 2SC2073U

NPN Silicon Epitaxial Planar Transistor

General purpose amplifier and high voltage application



1.Base 2.Collector 3.Emitter

SOT-89 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	160	V
Collector Emitter Voltage	V_{CEO}	160	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	1	A
Peak Collector Current (Single pulse, t_p = 300 μs)	I_{CP}	2	A
Total Power Dissipation	P_{tot}	0.5 1 [1)]	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

[1)] mounted on a ceramic substrate (250 mm^2 X 0.8 t)

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 30 mA	h_{FE}	200	-	400	-
Collector Base Cutoff Current at V_{CB} = 160 V	I_{CBO}	-	-	0.1	μA
Emitter Base Cutoff Current at V_{EB} = 4 V	I_{EBO}	-	-	0.1	μA
Collector Base Breakdown Voltage at I_C = 100 μA	$V_{(BR)CBO}$	160	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	160	-	-	V
Emitter Base Breakdown Voltage at I_E= 100 μA	$V_{(BR)EBO}$	7	-	-	V
Collector Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA at I_C = 200 mA, I_B = 2 mA	$V_{CE(sat)}$	- -	- -	0.5 1	V
Base Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA	$V_{BE(sat)}$	-	-	1.2	V
Transition Frequency at V_{CE} = 5 V, I_C = 50 mA	f_T	-	150	-	MHz
Collector Output Capacitance at V_{CB} = 10 V, f = 1 MHz	C_{ob}	-	10	-	pF

Fig. 1 P_C - Ta

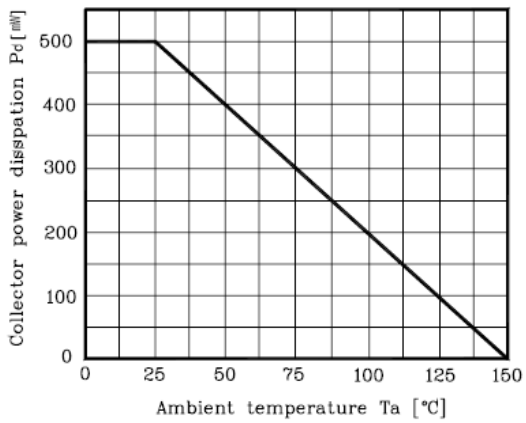


Fig. 2 I_C - V_{BE}

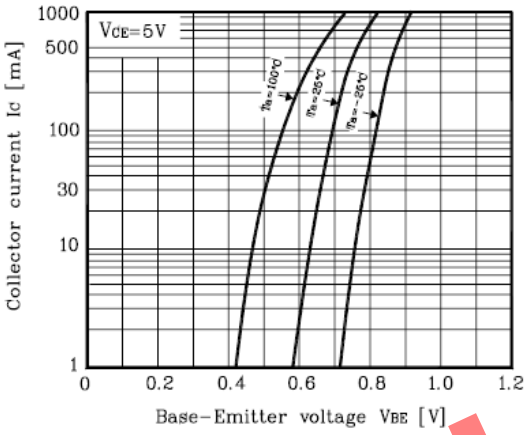


Fig. 3 $V_{CE(sat)}$ - I_C

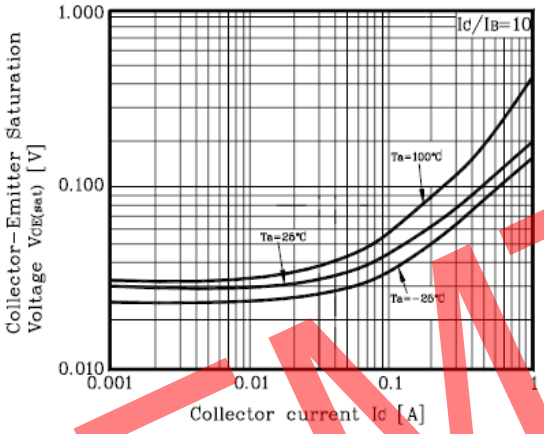


Fig. 4 I_C - V_{CE}

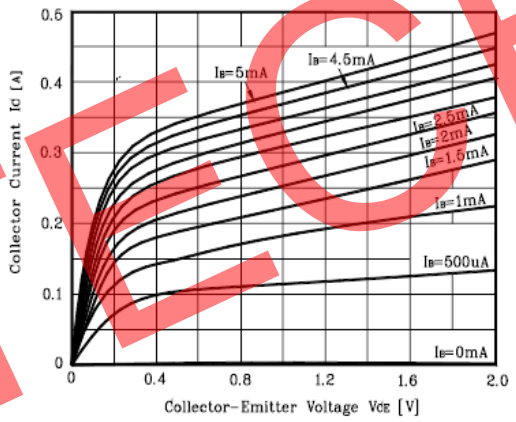


Fig. 5 I_C - V_{CE}

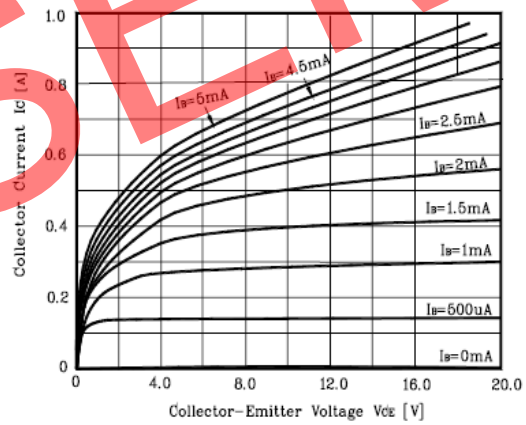
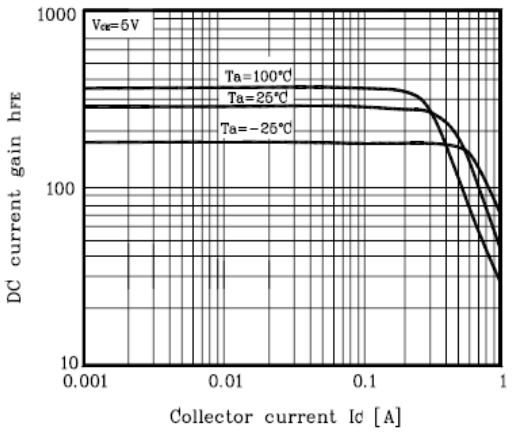
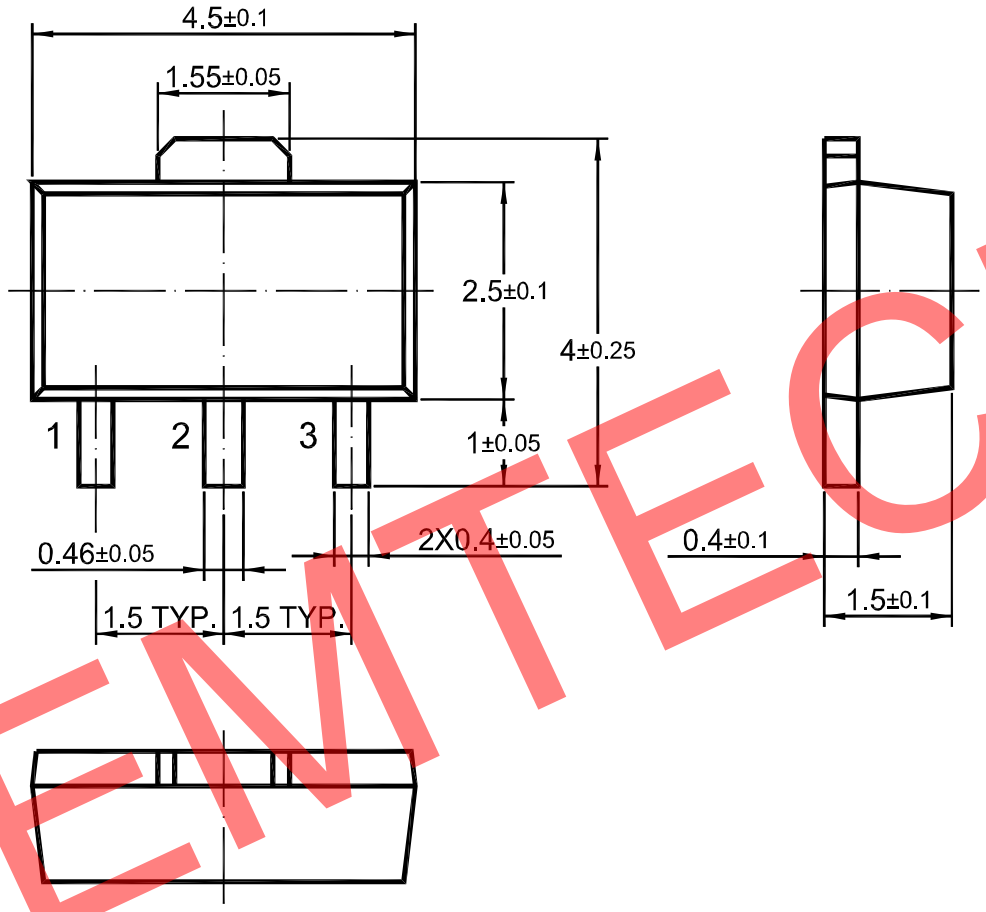


Fig. 6 h_{FE} I_C



SOT-89 PACKAGE OUTLINE



Dimensions in mm