



TO-92 Plastic-Encapsulate Transistors

2SC380TM TRANSISTOR (NPN)

FEATURE

Power dissipation

P_{CM} : 0.3 W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 0.05 A

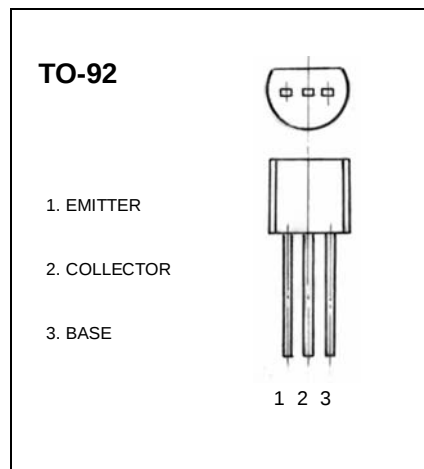
Collector-base voltage

$V_{(BR)CBO}$: 35 V

Operating and storage junction temperature range

T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

T_J : $150^{\circ}C$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$, $I_E=0$	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA$, $I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$, $I_C=0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB}=35V$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=12V$, $I_C=2mA$	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA$, $I_B=1mA$			0.4	V
Base-emitter voltage	V_{BE}	$I_C=10mA$, $I_B=1mA$			1.0	V
Transition frequency	f_T	$V_{CE}=5V$, $I_C=10mA$	100			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=1MHz$	1.4	2.0	3.2	pF
Collector-Base Time Constant	$C_c r_{bb'}$	$V_{CE}=10V$, $I_E=-1mA$, $f=30MHz$	10		50	ps
Power Gain	G_{pe}	$V_{CC}=6V$, $I_E=-1mA$ $F=10.7MHz$	27	29	33	dB

CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y
Range	40-80	70-140	120-240