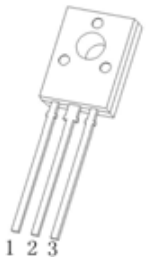
TO-126C Plastic-Encapsulate Transistors

2SC3807 TRANSISTOR (NPN)

TO – 126C

1. EMITTER
2. COLLECTOR
3. BASE



FEATURES

- Large Current Capacity
- High DC Current Gain
- Low Collector-Emitter Saturation Voltage

APPLICATIONS

- Low Frequency General Purpose Amplifier

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	15	V
I_C	Collector Current	2	A
P_C	Collector Power Dissipation	1.2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	104	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA,I_E=0	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	15			V
Collector cut-off current	I_{CBO}	V_{CB}=20V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=10V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.5A	800		3200	
	$h_{FE(2)}$	V_{CE}=5V, I_C=1A	600			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A,I_B=20mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=1A,I_B=20mA			1.2	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz		27		pF
Transition frequency	f_T	V_{CE}=10V,I_C=50mA		260		MHz