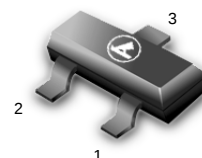
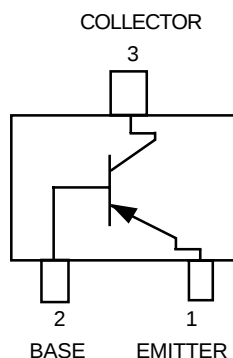


PNP General Purpose Amplifier Transistor Surface Mount

MSB709-RT1



CASE 318D-03, STYLE1
SC-59

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Rating	Symbol	Value	Unit
Collector-Base Voltage	$V_{(BR)CBO}$	-60	Vdc
Collector-Emitter Voltage	$V_{(BR)CEO}$	-45	Vdc
Emitter-Base Voltage	$V_{(BR)EBO}$	-7.0	Vdc
Collector Current - Continuous	I_C	-100	mAdc
Collector Current - Peak	$I_{C(P)}$	-200	mAdc

THERMAL CHARACTERISTICS

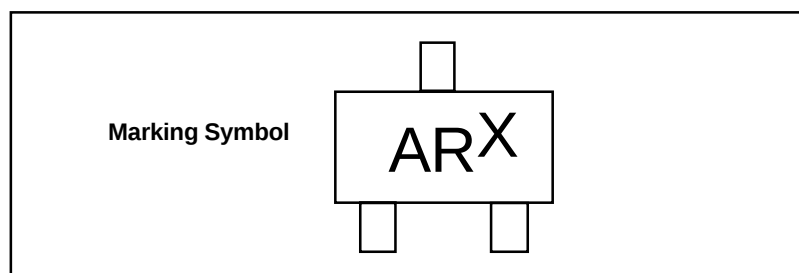
Characteristic	Symbol	Max	Unit
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Characteristic	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage ($I_C = -2.0\text{mAdc}, I_B = 0$)	$V_{(BR)CEO}$	-45	—	Vdc
Collector-Base Breakdown Voltage ($I_C = -10\mu\text{Adc}, I_E = 0$)	$V_{(BR)CBO}$	-60	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = -10\mu\text{Adc}, I_C = 0$)	$V_{(BR)EBO}$	-7.0	—	Vdc
Collector-Base Cutoff Current ($V_{CB} = -45\text{Vdc}, I_E = 0$)	I_{CBO}	—	-0.1	μAdc
Collector-Emitter Cutoff Current ($V_{CE} = -10\text{Vdc}, I_B = 0$)	I_{CEO}	—	-100	nAdc
DC Current Gain ⁽¹⁾ ($V_{CE} = -10\text{Vdc}, I_C = -2.0\text{mAdc}$)	h_{FE1}	210	340	—
Collector-Emitter Saturation Voltage ($I_C = -100\text{mAdc}, I_B = -10\text{mAdc}$)	$V_{CE(sat)}$	—	-0.5	Vdc

1. Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, D.C. $\leq 2\%$.

DEVICE MARKING



The "X" represents a smaller alpha digit Date Code. The Date Code indicates the actual month in which the part was manufactured.