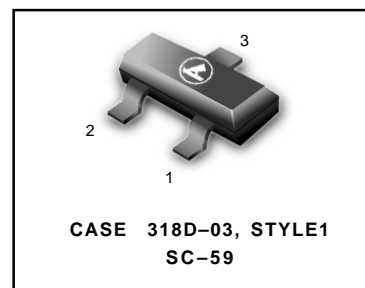
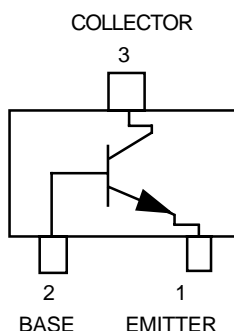


# NPN General Purpose Amplifier Transistor Surface Mount

**MSD602-RT1**

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

Rating	Symbol	Value	Unit
Collector-Base Voltage	$V_{(BR)CBO}$	60	Vdc
Collector-Emitter Voltage	$V_{(BR)CEO}$	50	Vdc
Emitter-Base Voltage	$V_{(BR)EBO}$	7.0	Vdc
Collector Current-Continuous	$I_C$	500	mAdc
Collector Current-Peak	$I_{C(P)}$	1.0	Adc

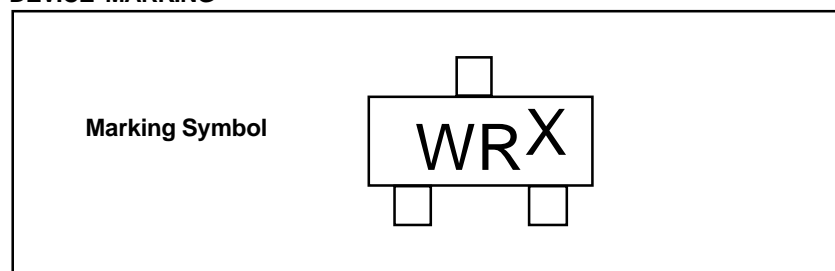
**THERMAL CHARACTERISTICS**

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 ( $I_C = 10 \text{ mAdc}$ , $I_B = 0$ )	$V_{(BR)CEO}$	50	—	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 ( $V_{CB} = 20\text{Vdc}$ , $I_E = 0$ )	$I_{CBO}$	—	0.1	$\mu\text{Adc}$
DC Current Gain <sup>(1)</sup>				—
( $V_{CE} = 10 \text{ Vdc}$ , $I_C = 150 \text{ mAdc}$ )	$h_{FE1}$	120	240	
( $V_{CE} = 10 \text{ Vdc}$ , $I_C = 500 \text{ mAdc}$ )	$h_{FE2}$	40	—	
Collector-Emitter Saturation Voltage ( $I_C = 300 \text{ mAdc}$ , $I_B = 30 \text{ mAdc}$ )	$V_{CE(sat)}$	—	0.6	Vdc
Output Capacitance ( $V_{CB} = 10\text{Vdc}$ , $I_E = 0$ , $f = 1.0\text{MHz}$ )	$C_{cb}$	—	15	pF

 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.