

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

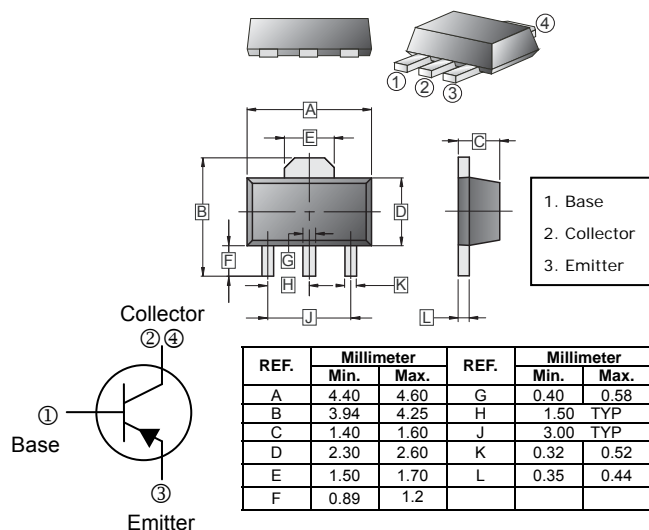
FEATURES

- -60Volt V_{CE0}
- 3 Amp continuous current
- Low saturation voltage

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7' inch

SOT-89



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	DC	-3
		Pulse ¹	-6
Collector Power Dissipation	P_C	0.5	W
	P_C^2	2	
Junction & Storage temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-80	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector-emitter breakdown	$V_{(BR)CEO}$	-60	-	-	V	$I_C = -10\text{mA}, I_B = 0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -100\mu\text{A}, I_C = 0$
Collector cut-off current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -60\text{V}, I_E = 0$
Emitter cut-off current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -4\text{V}, I_C = 0$
DC current gain	h_{FE}	70	200	-		$V_{CE} = -2\text{V}, I_C = -50\text{mA}$
		100	200	300		$V_{CE} = -2\text{V}, I_C = -500\text{mA}$
		80	170	-		$V_{CE} = -2\text{V}, I_C = -1\text{A}$
		40	150	-		$V_{CE} = -2\text{V}, I_C = -2\text{A}$
Collector-emitter saturation voltage	$V_{CE(sat)1}$	-	-150	-300	mV	$I_C = -1\text{A}, I_B = -100\text{mA}$
	$V_{CE(sat)2}$	-	-450	-600	mV	$I_C = -3\text{A}, I_B = -300\text{mA}$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-0.9	-1.25	V	$I_C = -1\text{A}, I_B = -100\text{mA}$
Base-emitter saturation voltage On	$V_{BE(ON)}$	-	-0.8	-1	V	$I_C = -1\text{A}, V_{CE} = -2\text{V}$
Output capacitance	C_{CO}	-	-	30	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$
Transition frequency	f_T	100	140	-	MHz	$V_{CE} = -5\text{V}, I_C = -100\text{mA}, f = 100\text{MHz}$
Switching Time	T_{ON}	-	40	-	nS	$V_{CC} = -10\text{V}, I_C = -500\text{mA}, I_{B1} = -I_{B2} = -50\text{mA}$
	T_{OFF}	-	450	-		

Note:

1. Measured under pulse condition. Pulse width < 300us, Duty cycle < 2%
2. Spice parameter data is available upon request for this device.

CHARACTERISTIC CURVES

