

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

FEATURES

- High Voltage Application
- Telephone Application
- Complementary to MMBTA93

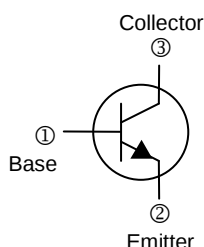
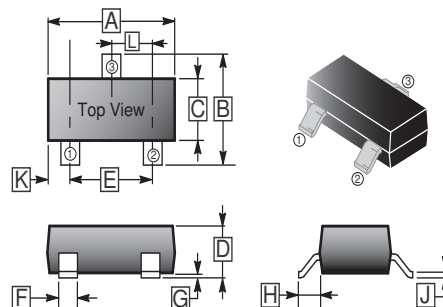
MARKING

ABX

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			

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

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	200	V
Collector to Emitter Voltage	V_{CEO}	200	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	350	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	357	$^\circ\text{C} / \text{W}$
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 to Base Breakdown Voltage	$V_{(BR)CBO}$	200	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	200	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=100\mu\text{A}, I_C=0$
DC Current Gain	$h_{FE(1)}^1$	40	-	-		$V_{CE}=10\text{V}, I_C=10\text{mA}$
	$h_{FE(2)}^1$	40	-	-		$V_{CE}=10\text{V}, I_C=1\text{mA}$
	$h_{FE(3)}^1$	40	-	-		$V_{CE}=10\text{V}, I_C=30\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}^1$	-	-	0.5	V	$I_C=20\text{mA}, I_B=2\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}^1$	-	-	0.9	V	$I_C=20\text{mA}, I_B=2\text{mA}$
Transition Frequency	f_T	50	-	-	MHz	$V_{CE}=20\text{V}, I_E=10\text{mA}, f=100\text{MHz}$
Collector output capacitance	C_{ob}	-	-	4	pF	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$

Note:

1. Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2.0\%$.