

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

## FEATURES

- High Current.
- Low  $V_{CE(sat)}$  ·  $V_{CE(sat)} \leq 0.25V$  (@  $I_C=200mA$  /  $I_B=10mA$ )
- Complement of 2SC4738.

## Application

- General Purpose Amplification.

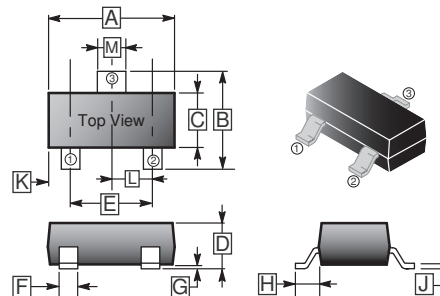
## MARKING

BX

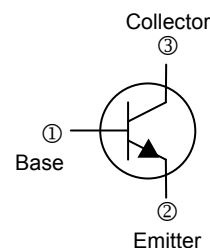
## PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-523	3K	7' inch

## SOT-523



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.5	1.7	G	-	0.1
B	1.45	1.75	H	0.55 REF.	
C	0.75	0.85	J	0.1	0.2
D	0.7	0.9	K	-	
E	0.9	1.1	L	0.5 TYP.	
F	0.15	0.25	M	0.25	0.325



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

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	15	V
Collector to Emitter Voltage	$V_{CEO}$	12	V
Emitter to Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	500	mA
Collector Power Dissipation	$P_C$	150	mW
Junction & Storage Temperature	$T_J, T_{STG}$	150, -55 ~ 150	$^\circ C$

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	15	-	-	V	$I_C=10\mu A, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	12	-	-	V	$I_C=1mA, I_B=0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=10\mu A, I_C=0$
Collector cut-off current	$I_{CBO}$	-	-	0.1	$\mu A$	$V_{CB}=15V, I_E=0$
Emitter cut-off current	$I_{EBO}$	-	-	0.1	$\mu A$	$V_{EB}=6V, I_C=0$
DC current gain	$h_{FE}$	270	-	680		$V_{CE}=2V, I_C=10mA$
Collector-emitter saturation voltage *	$V_{CE(sat)}$	-	-	0.25	V	$I_C=200mA, I_B=10mA$
Transition frequency	$f_T$	-	320	-	MHz	$V_{CE}=2V, I_C=10mA, f=100MHz$
Collector output capacitance	$C_{ob}$	-	7.5	-	pF	$V_{CB}=10V, I_E=0, f=1MHz$

**CHARACTERISTIC CURVES**

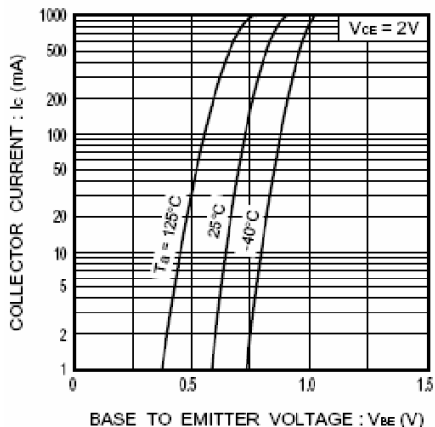


Fig.1 Grounded emitter propagation characteristics

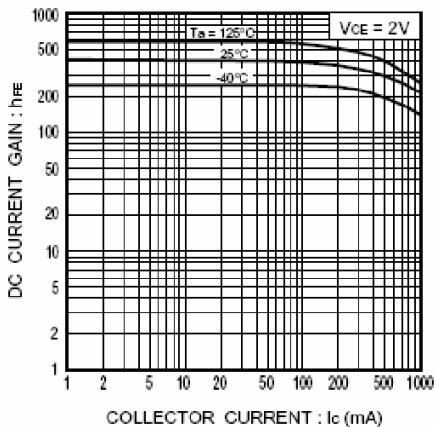


Fig.2 DC current gain vs. collector current

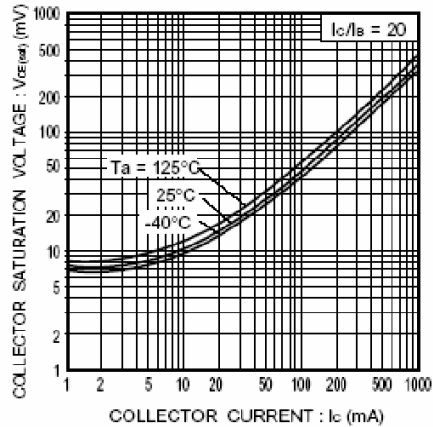


Fig.3 Collector-emitter saturation voltage vs. collector current ( I )

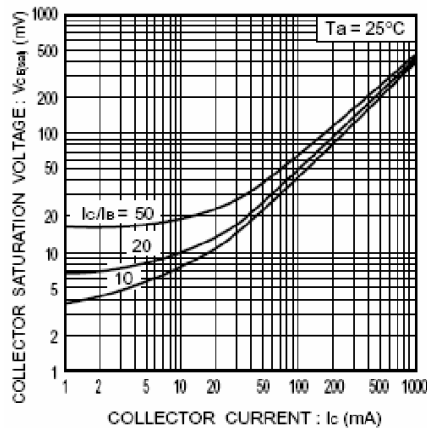


Fig.4 Collector-emitter saturation voltage vs. collector current ( II )

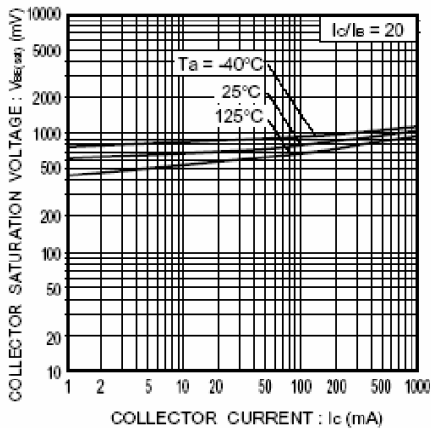


Fig.5 Base-emitter saturation voltage vs. collector current

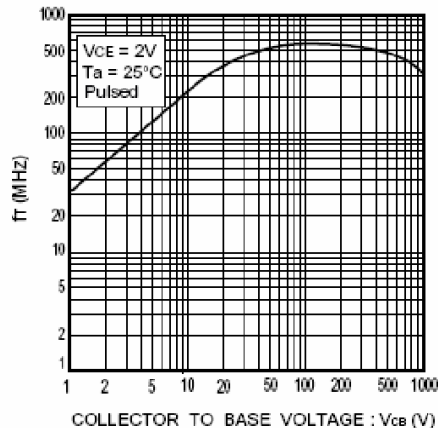


Fig.6 Collector output capacitance vs. base voltage

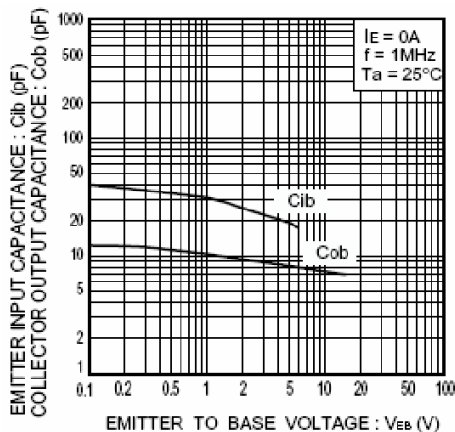


Fig.7 Collector output capacitance vs collector-base voltage  
Emitter input capacitance vs emitter-base voltage