

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.

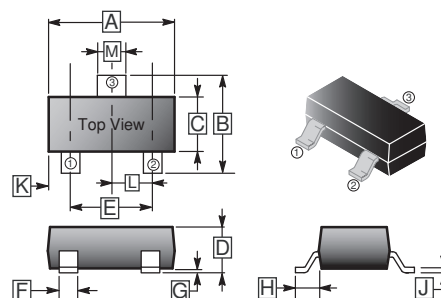
MARKING

BX

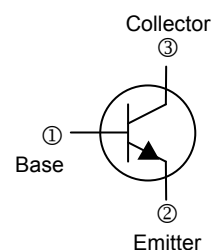
PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-523	3K	7' inch

SOT-523



REF.	Min.	Max.	REF.	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	μA	$V_{CB}=15V, I_E=0$
Emitter cut-off current	I_{EBO}	-	-	0.1	μA	$V_{EB}=6V, I_C=0$
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

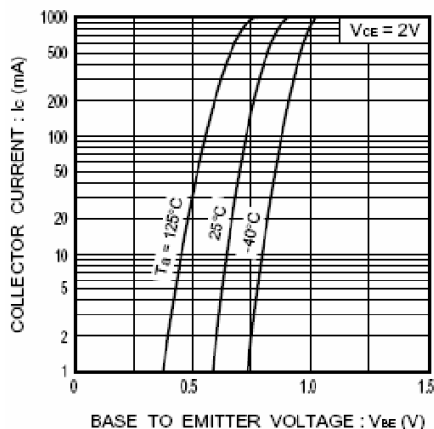


Fig.1 Grounded emitter propagation characteristics

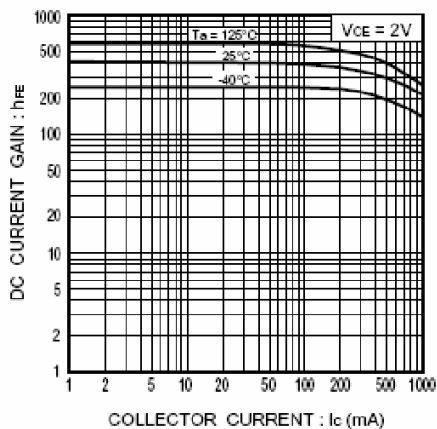


Fig.2 DC current gain vs. collector current

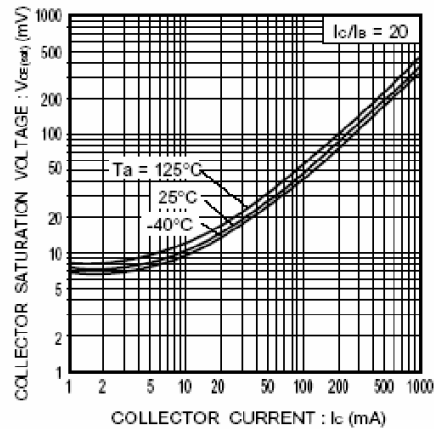


Fig.3 Collector-emitter saturation voltage vs. collector current (I)

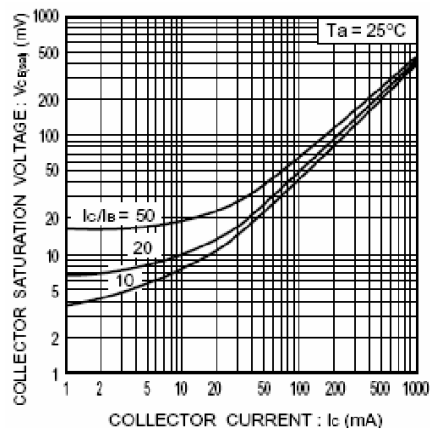


Fig.4 Collector-emitter saturation voltage vs. collector current (II)

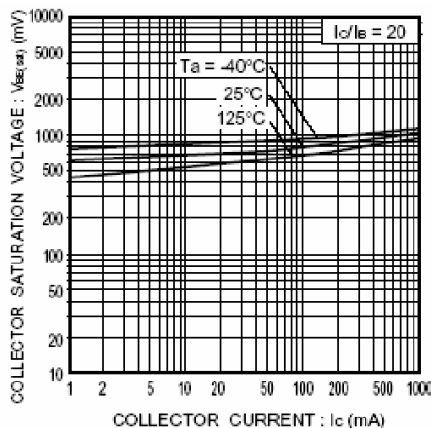


Fig.5 Base-emitter saturation voltage vs. collector current

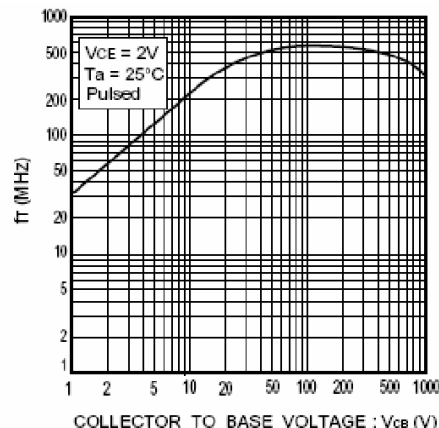


Fig.6 Collector output capacitance
Emitter input capacitance
vs. base voltage

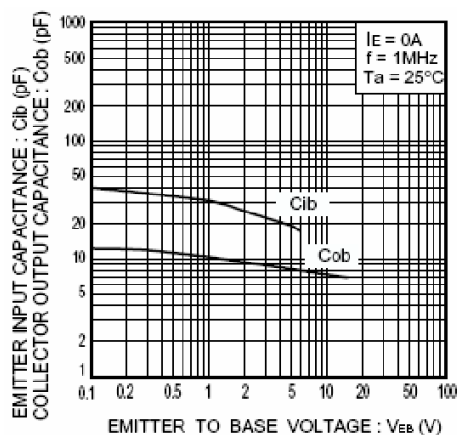


Fig.7 Collector output capacitance
vs collector-base voltage
Emitter input capacitance
vs emitter-base voltage