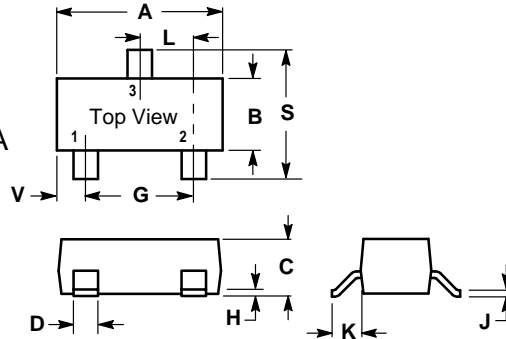
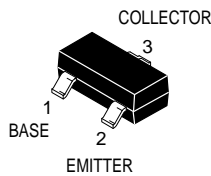


RoHS Compliant Product

**FEATURES**

- \* High current. ( $I_C=5A$ )
- \* Low saturation voltage, typically  
 $V_{CE(sat)}=0.1V$  at  $I_C / I_B=150mA / 15mA$



SOT-323		
Dim	Min	Max
A	1.800	2.200
B	1.150	1.350
C	0.800	1.000
D	0.300	0.400
G	1.200	1.400
H	0.000	0.100
J	0.100	0.250
K	0.350	0.500
L	0.590	0.720
S	2.000	2.400
V	0.280	0.420
All Dimension in mm		

**MAXIMUM RATINGS\***  $T_A=25^\circ C$  unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	500	mA
$P_C$	Collector Dissipation	200	mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55-150	$^\circ C$

**ELECTRICAL CHARACTERISTICS** ( $T_{amb}=25^\circ C$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=30V, I_E=0$			0.5	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			0.5	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=3V, I_C=10mA$	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150mA, I_B=15mA$			0.4	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=20mA$ $f=100MHz$		250		MHz
Output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		6.5		pF

**CLASSIFICATION OF  $h_{FE}$**

Rank	Q	R
Range	120-270	180-390
Marking	YQ	YR

Electrical characteristic curves

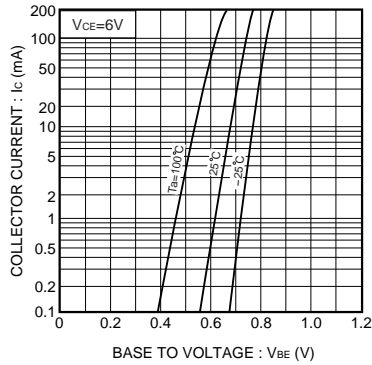


Fig.1 Ground emitter propagation characteristics

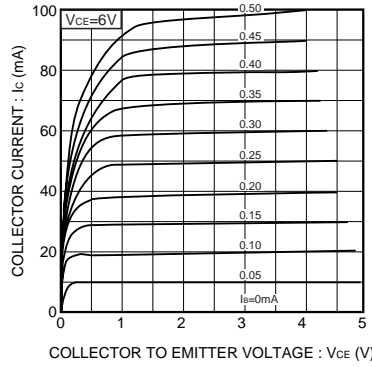


Fig.2 Ground emitter output characteristics

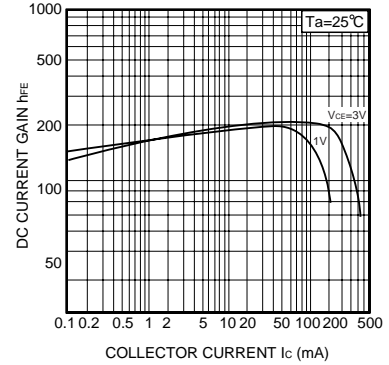


Fig.3 DC current gain vs. Collector current (I)

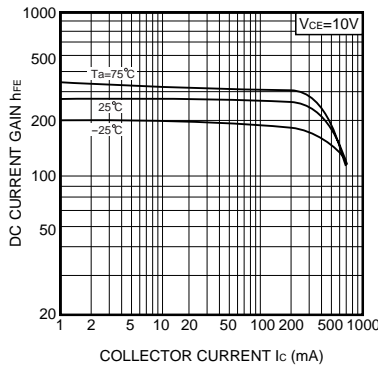


Fig.4 DC current gain vs. Collector current (II)

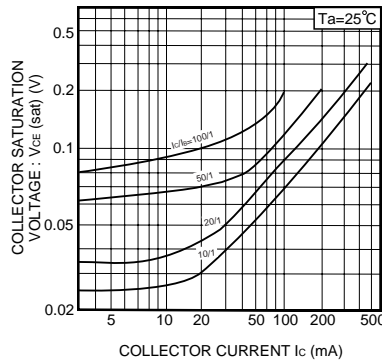


Fig.5 Collector-emitter saturation voltage vs. Collector current

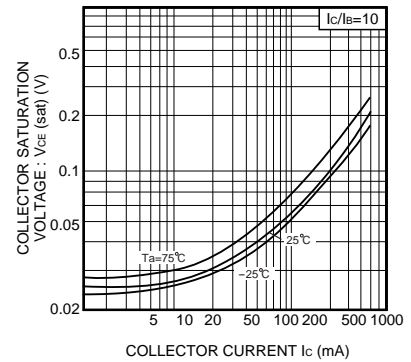


Fig.6 Collector-emitter saturation voltage vs. collector current

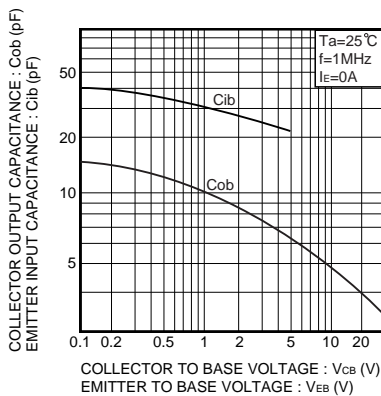


Fig.7 Input-and-output capacity vs. voltage characteristic

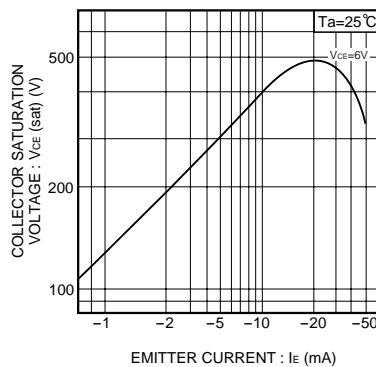


Fig.8 Transition frequency vs. emitter current