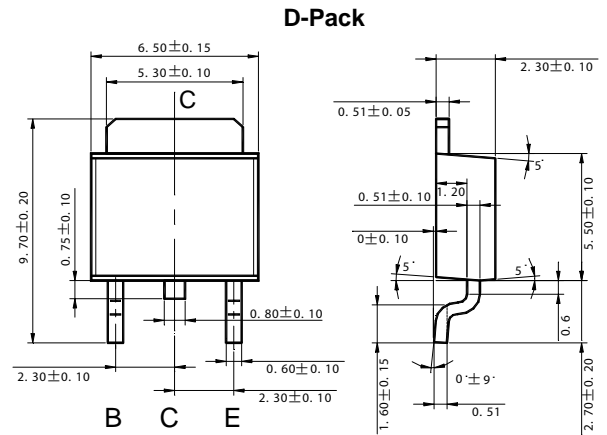


RoHS Compliant Product

FEATURES

- Low Collector-to-Emitter Voltage (Typ. 0.25 V)
- Excellent DC Current Gain Characteristics



MAXIMUM RATINGS* (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	20	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current	I _C	5	A
Collector Dissipation	P _C	1	W
Junction Temperature	T _j	-55~+150	°C
Storage Temperature	T _{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ.	Max	Unit.	Test Conditions
Collector-Base Breakdown Voltage	BV _{CB0}	50	-	-	V	I _C =50μA, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CEO}	20	-	-	V	I _C =1mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EBO}	6	-	-	V	I _E =50μA, I _C =0
Collector-Base Cutoff Current	I _{CB0}	-	-	0.5	μA	V _{CB} =40V, I _E =0
Emitter-Base Cutoff Current	I _{EBO}	-	-	0.5	μA	V _{EB} =5V, I _C =0
Collector Saturation Voltage	V _{CE(sat)}	-	0.25	1	V	I _C =4A, I _B =100mA
DC Current Gain	h _{FE}	120	-	390		V _{CE} =2V, I _C =500mA
Gain-Bandwidth Product	f _T	-	150	-	MHz	V _{CE} =6V, I _C =50mA, f=100MHz
Output Capacitance	C _{ob}	-	30	-	pF	V _{CB} =20V, I _E =0, f=1MHz

CLASSIFICATION OF h_{FE}

Rank	Q	R
Range	120-270	180-390

Typical Characteristics

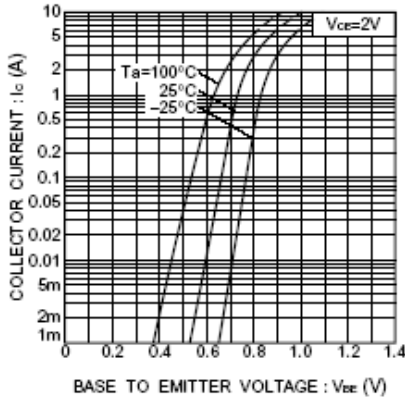


Fig.1 Grounded emitter propagation characteristics

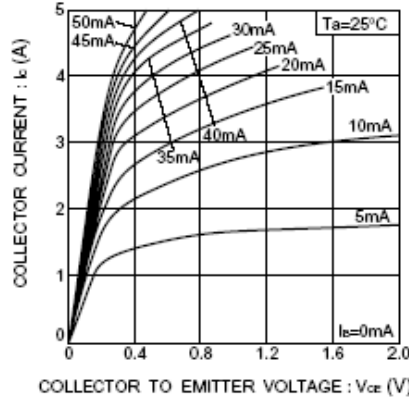


Fig.2 Grounded emitter output characteristics

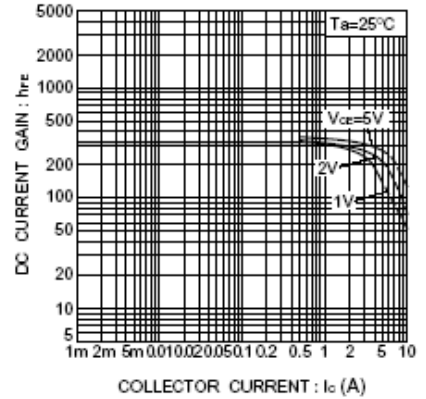


Fig.3 DC current gain vs. collector current (I)

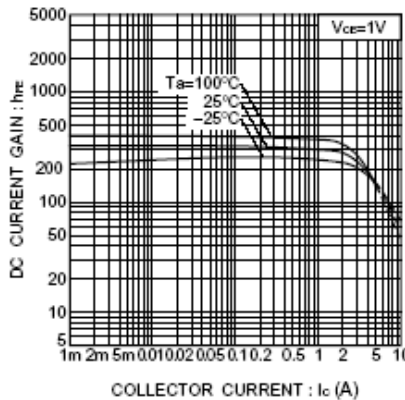


Fig.4 DC current gain vs. collector current (II)

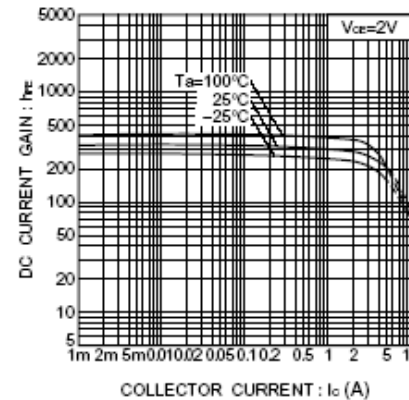


Fig.5 DC current gain vs. collector current (III)

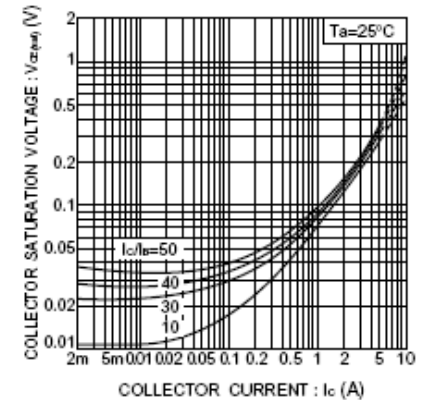


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

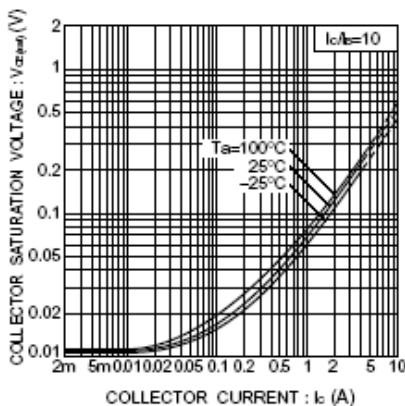


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

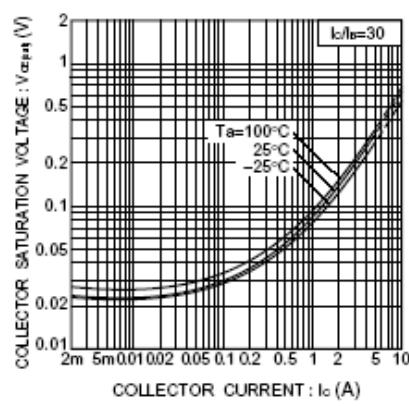


Fig.8 Collector-emitter saturation voltage vs. collector current (III)

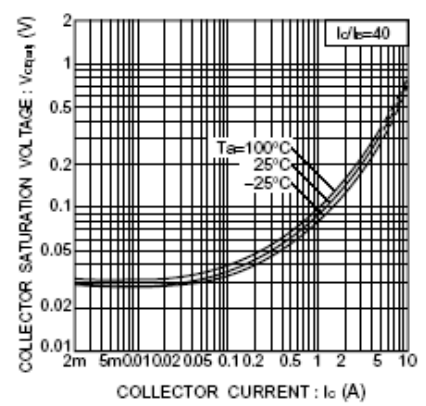


Fig.9 Collector-emitter saturation voltage vs. collector current (IV)

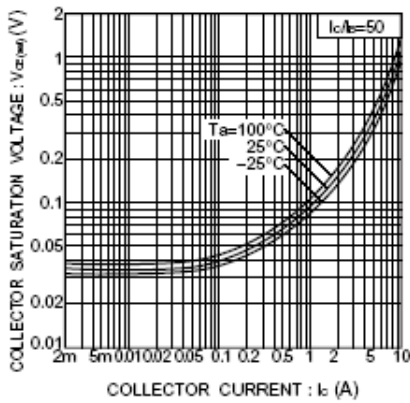


Fig.10 Collector-emitter saturation voltage vs. collector current (V)

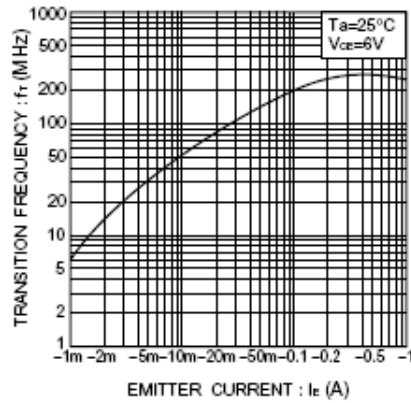


Fig.11 Gain bandwidth product vs. emitter current

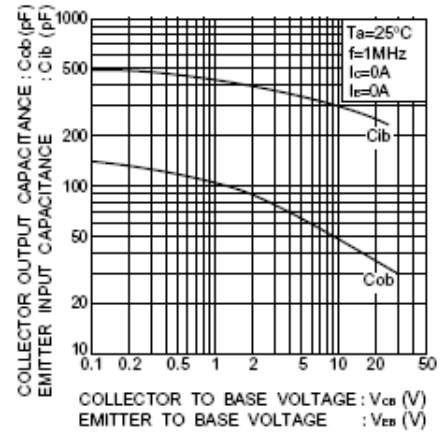


Fig.12 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage