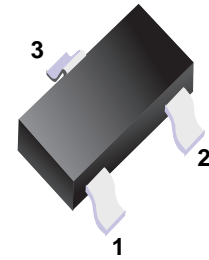


■ NPN Transistors



1.Base
2.Emitter
3.Collector

■ Simplified outline(SOT-323)

■ Features

- Low Cob. Cob=2.0pF (Typ.)
- Complementary to 2SA1576A

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	60	V
Collector - Emitter Voltage	V _{CEO}	50	
Emitter - Base Voltage	V _{EBO}	7	
Collector Current - Continuous	I _c	150	mA
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 uA, I _E = 0	60			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = 1 mA, I _B = 0	50			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 uA, I _c = 0	7			
Collector-base cut-off current	I _{CB0}	V _{CB} = 60V, I _E = 0			0.1	uA
Emitter cut-off current	I _{EBO}	V _{EB} = 7V, I _c =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =50 mA, I _B =5mA			0.4	V
Base - emitter saturation voltage	V _{BE(sat)}	I _c =50 mA, I _B =5mA			1.2	
DC current gain	h _{FE}	V _{CE} = 6V, I _c = 1mA	120		560	
Collector output capacitance	C _{ob}	V _{CE} = 12V, I _E =0,f=1MHz		2	3.5	pF
Transition frequency	f _T	V _{CE} = 12V, I _E =-2mA,f=100 MHz		180		MHz

■ Typical Characteristics

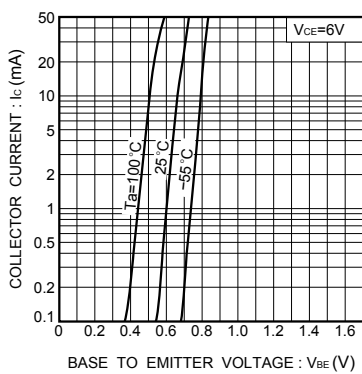


Fig.1 Grounded emitter propagation characteristics

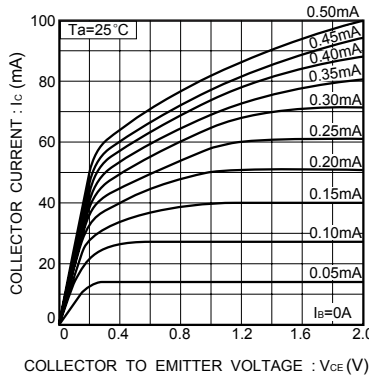


Fig.2 Grounded emitter output characteristics (I)

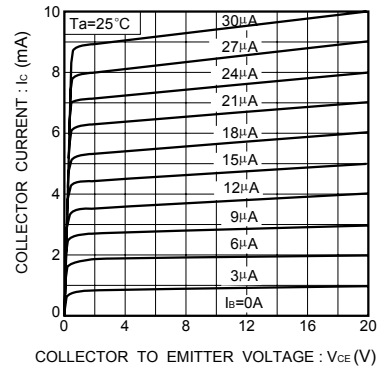


Fig.3 Grounded emitter output characteristics (I)I

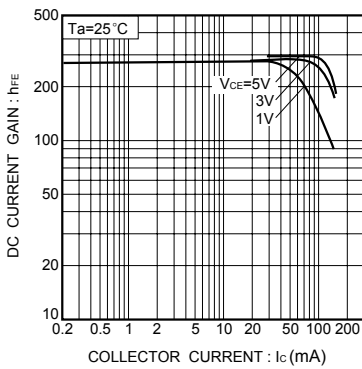


Fig.4 DC current gain vs. collector current (I)

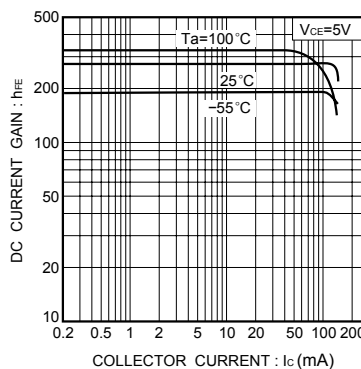


Fig.5 DC current gain vs. collector current (I)I

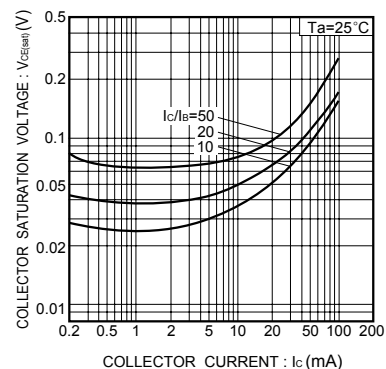


Fig.6 Collector-emitter saturation voltage vs. collector current

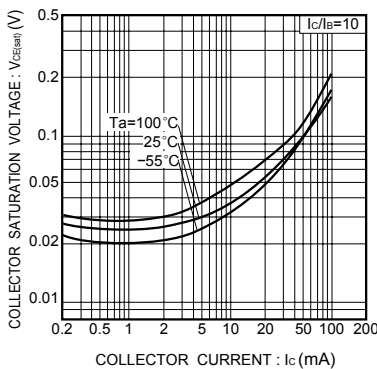


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

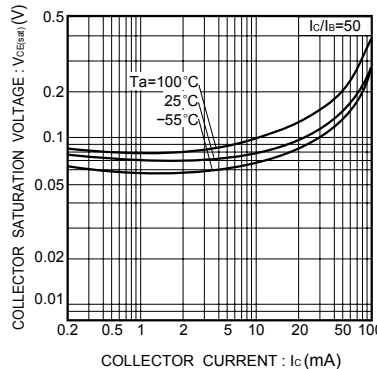


Fig.8 Collector-emitter saturation voltage vs. collector current (I)I

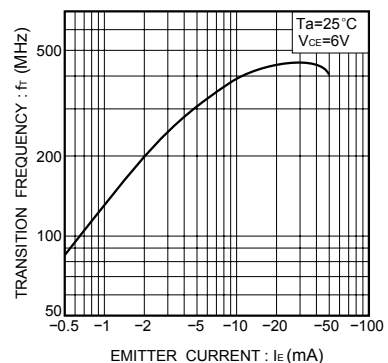


Fig.9 Gain bandwidth product vs. emitter current

■ Typical Characteristics

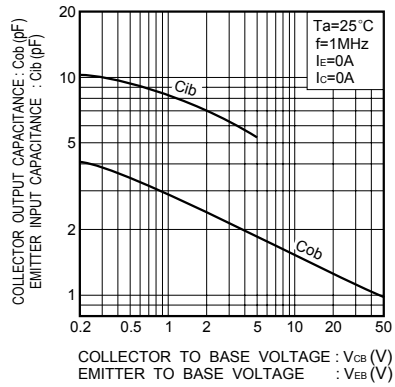


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

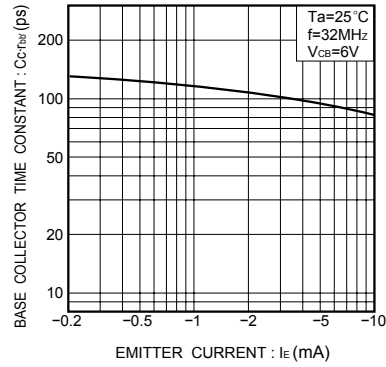
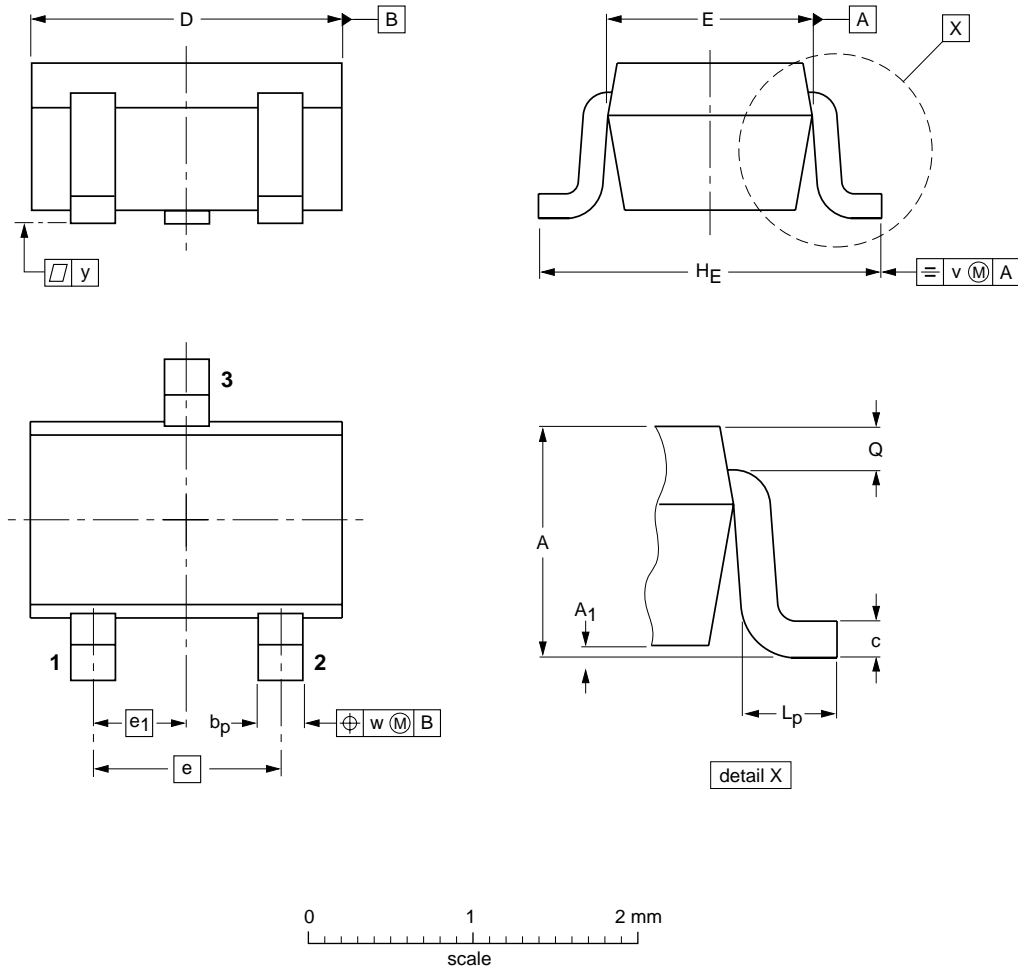


Fig.11 Base-collector time constant vs. emitter current



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-323	Tape/Reel, 7" reel	3000	EIA-481-1