

NPN General Purpose Amplifier



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic insertion

Application

- Signal amplification
- Switching circuit

J-STD-002 and JESD22-B102

■ Maximum Ratings (T_a=25 °C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code			2SC2411-Q	ANQ
			2SC2411-R	ANR
Collector-base voltage	V _{CBO}	V	I _C =100μA, I _E =0	40
Collector-emitter voltage	V _{CEO}	V	I _C =1mA, I _B =0	32
Emitter-base voltage	V _{EBO}	V	I _E =100μA, I _C =0	5
Collector current	I _C	A		0.5
Power dissipation	P _D	mW		200
Junction temperature	T _J			-55 to +150
Storage temperature	T _{STG}			-55 to +150



2SC2411

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■ Electrical Characteristics (T_a=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions		Min	Typ	Max
Collector-base breakdown voltage	V _{(BR)CBO}	V	I _C =100μA, I _E =0		40		
Collector-emitter breakdown voltage	V _{(BR)CEO}	V	I _C =1mA, I _B =0		32		
Emitter-base breakdown voltage	V _{(BR)EBO}	V	I _E =100μA, I _C =0		5		
Collector-base cut-off current	I _{CBO}	uA	V _{CB} =20V				0.1
Emitter-base cut-off current	I _{EBO}	uA	V _{EB} =4V				0.1
DC current gain	h _{FE}		2SC2411-Q	V _{CE} =3V, I _C =100mA	120		270
			2SC2411-R		180		390
Collector-emitter saturation voltage	V _{CE(sat)}	V	I _C =500mA, I _B =50mA				0.6
Transition frequency	f _T	MHz	V _{CE} =5V, I _C =20mA, f=100MHz			250	
Collector-base output capacitance	Cob	pF	V _{CB} =10V, I _E =0A, f=1MHz			3	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	RθJ-A ⁽¹⁾	/W	625
Thermal resistance, junction-to-case	RθJ-C ⁽¹⁾	/W	500

Note:

- 1 Device mounted on PCB, single-sided copper with standard footprint



■ Characteristics

Fig 1 Static Characteristics

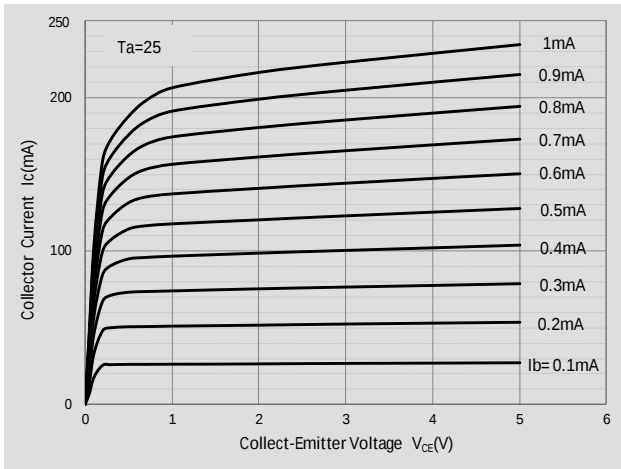


Fig 2 DC Current Gain

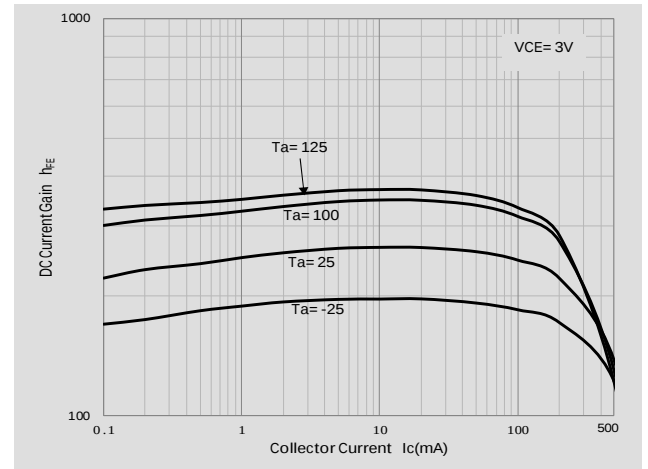


Fig 3 Collector-Emitter Saturation Voltage

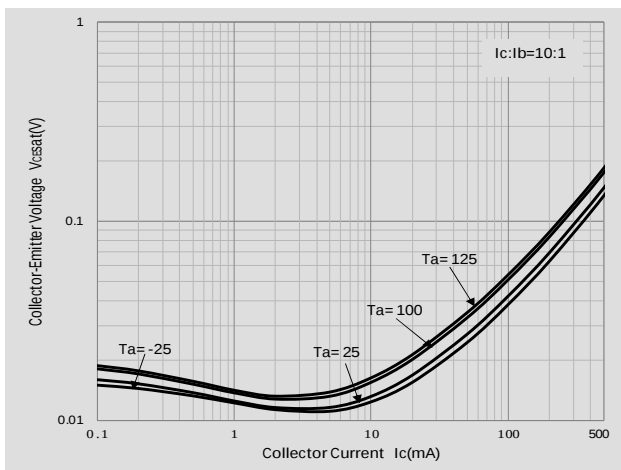


Fig 4 Base-Emitter Saturation Voltage

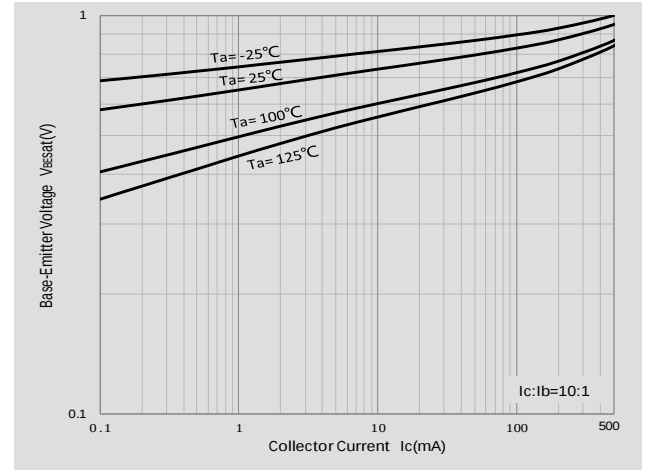


Fig 5 Base-Emitter On Voltage

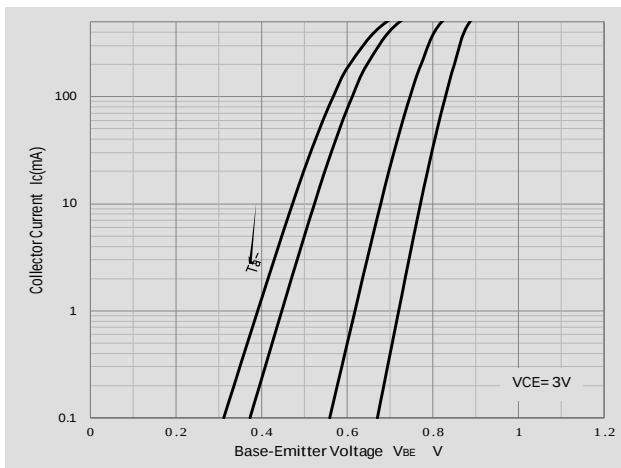


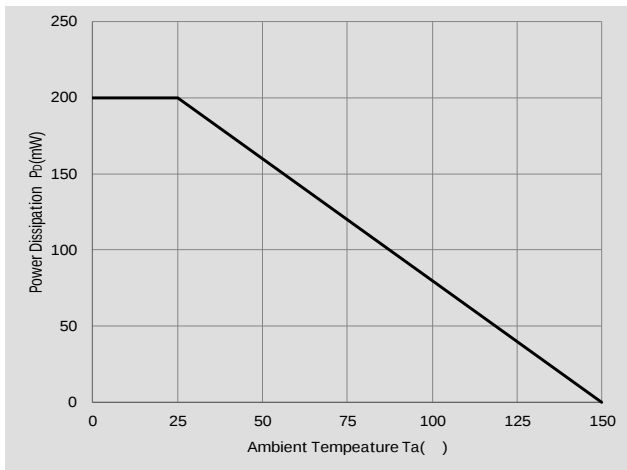
Fig 6 Cob/Cib- V_{CB}/V_{EB}



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Fig 7 P_D - T_a Curve



0”

