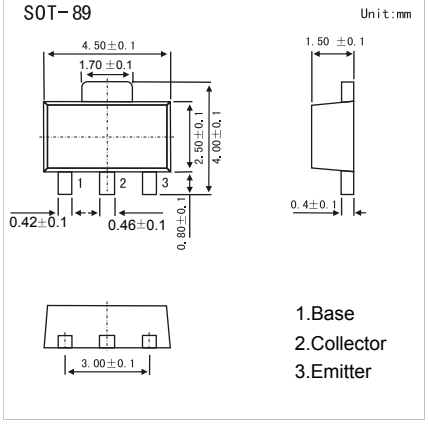
NPN Transistors

2SD1767



■ Features

- High breakdown voltage, BV_{CEO}=80V, and high current, I_C=0.7A.
- Complementary to 2SB1189

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	80	V
Collector - Emitter Voltage	V_{CEO}	80	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	0.7	A
Collector Current - Pulse	I_{CP}	1	
Collector Power Dissipation	P_C	0.5	W
		2	
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 uA， I_E= 0	80			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA，I_B= 0	80			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 uA， I_C= 0	5			
Collector-base cut-off current	I_{CBO}	V_{CB}= 60 V , I_E= 0			0.5	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 4V , I_C=0			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B=50 mA		0.2	0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=500 mA, I_B=50 mA			1.2	
DC current gain	h_{FE}	V_{CE}= 3V, I_C= 100 mA	120		390	
Collector Output capacitance	C_{ob}	V_{CB}= 10V, I_E= 0,f=1MHz		10		pF
Transition frequency	f_T	V_{CE}= 10V, I_E= -50mA,f=100MHz		120		MHz

■ Classification of h_{fe}

Type	2SD1767-Q	2SD1767-R
Range	120-270	180-390
Marking	DC Q*	DC R*

NPN Transistors

2SD1767

■ Typical Characterisitics

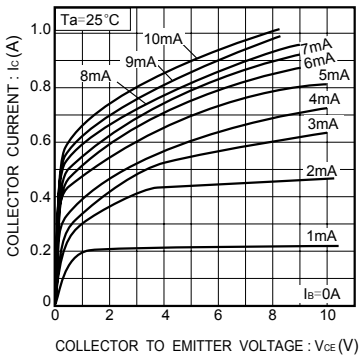


Fig.1 Ground emitter output characteristics

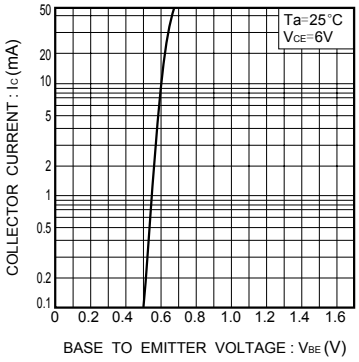


Fig.2 Ground emitter propagetion characteristics

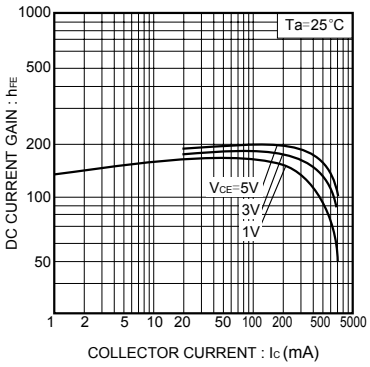


Fig.3 DC current gain vs. collector current

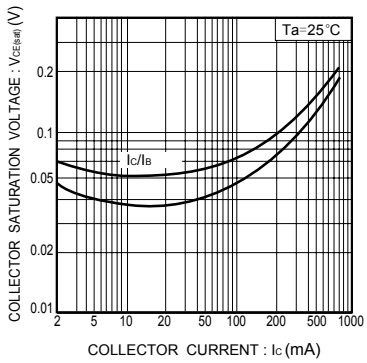


Fig.4 Collector-emitter saturation voltage vs. collector current

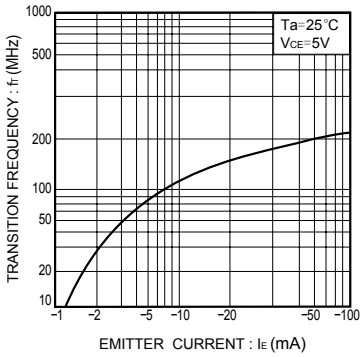


Fig.5 Resistance raito vs. emitter current

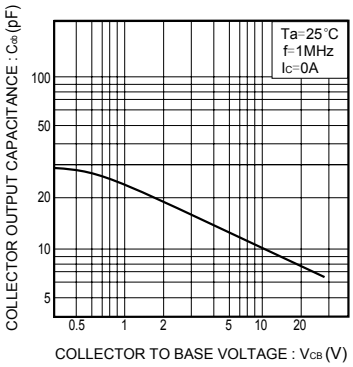


Fig.6 Collector output capacitance vs. collector-base voltage

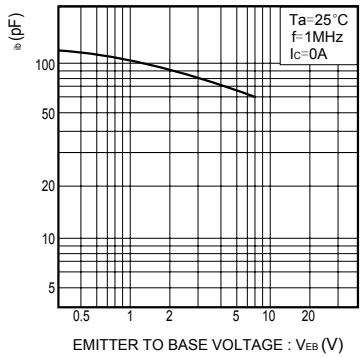


Fig.7 Emitter input capacitance vs. emitter-base voltage

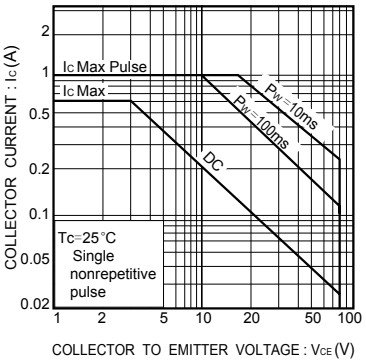


Fig.9 Safe operating area