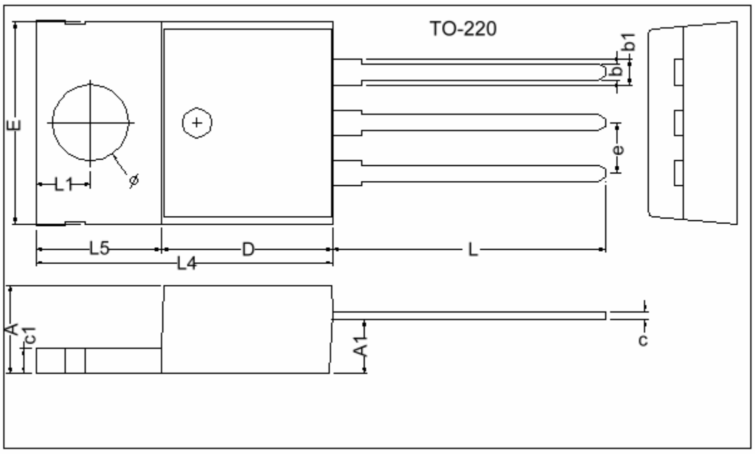
GE13007

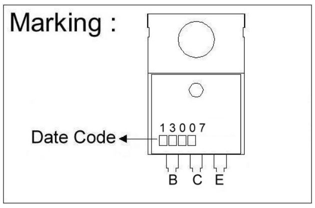
NPN SILICON TRIPLE DIFFUSED MESA TYPE TRANSISTOR

Description

The GE13007 is designed for electronic transformers and power switching circuit applications.

Package Dimensions





REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.80	c1	1.25	1.45
b	0.76	1.00	b1	1.17	1.47
c	0.36	0.50	L	13.25	14.25
D	8.60	9.00	e	2.54 REF.	
E	9.80	10.4	L1	2.60	2.89
L4	14.7	15.3	Ø	3.71	3.96
L5	6.20	6.60	A1	2.60	2.80

Absolute Maximum Ratings at Ta = 25℃

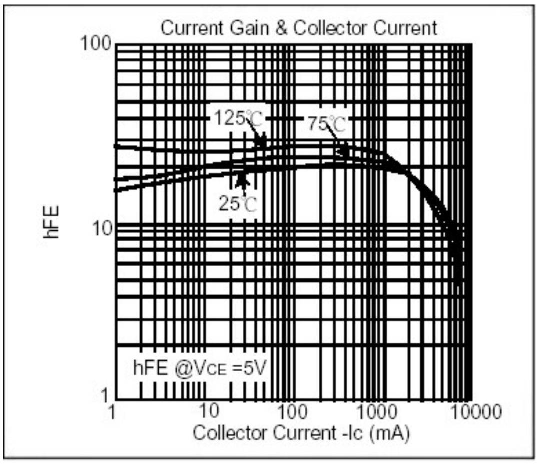
Parameter	Symbol	Ratings	Unit
Junction Temperature	Tj	+150	℃
Storage Temperature	Tstg	-55 ~ +150	℃
Collector to Base Voltage	V_{CBO}	700	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	9	V
Collector Current	I_C	8	A
Total Power Dissipation at Tc=25℃	PD	80	W

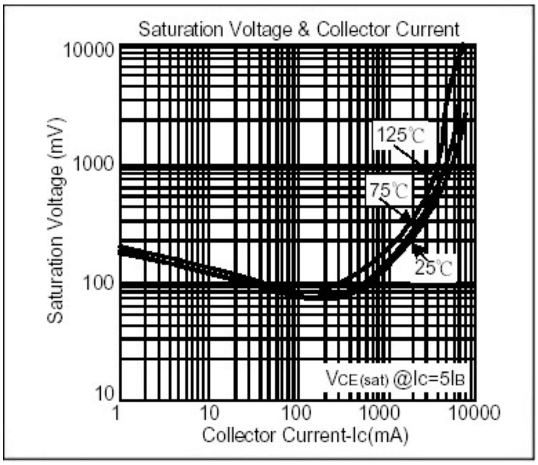
Electrical Characteristics(Tc = 25℃ Unless otherwise specified)

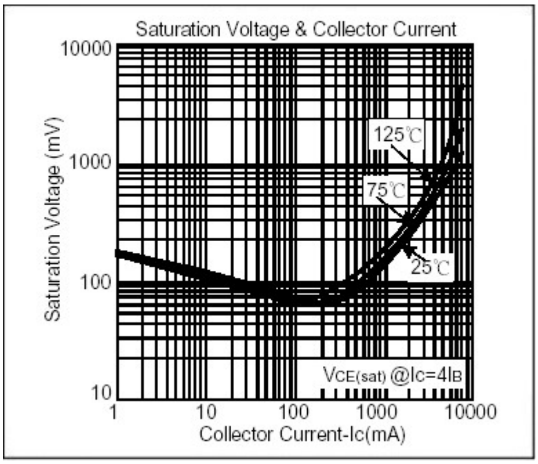
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	400	-	-	V	I_C=10mA , I_B=0
Collector-Base Breakdown Voltage	BV_{CBO}	700	-	-	V	I_C=1mA , I_E=0
Emitter-Base Breakdown Voltage	BV_{EBO}	9	-	-	V	I_E=1mA , I_C=0
Collector Cutoff Current	I_{CBO}	-	-	100	μA	V_{CB}=700V
Collector-Emitter Cutoff Current	I_{CEO}	-	-	50	μA	V_{CE}=400V
Emitter-Base Cutoff Current	I_{EBO}	-	-	10	μA	V_{EB}=7V
Collector-Emitter Saturation Voltage	*$V_{CE(sat)1}$	-	-	1.2	V	I_C=2A, I_B=400mA
	*$V_{CE(sat)2}$	-	-	3.0	V	I_C=8A, I_B=2A
Base-Emitter Saturation Voltage	*$V_{BE(sat)}$	-	-	1.2	V	I_C=2A, I_B=400mA
DC Current Gain	*H_{FE1}	8	-	50		V_{CE}=5V, I_C=2A
	*H_{FE2}	5	-	-		V_{CE}=5V, I_C=5A
Frequency characteristics	f_T	4	-	-	MHz	V_{CE}=10V, I_C=500mA, f=1MHz
Turn-On Time	ton	-	-	1.6	μs	V_{CC}=125V, I_C=5A, I_{B1}=I_{B2}=0.4A
Storage Time	tstg	-	-	3		
Fall Time	tf	-	-	0.7		

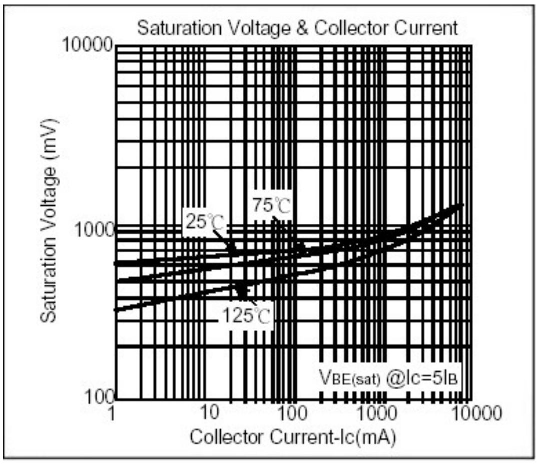
*Pulse Test: Pulse Width=300μs, Duty Cycle≦2%

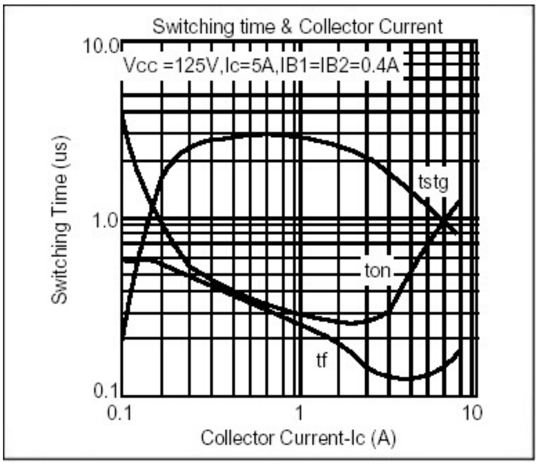
Characteristics Curve

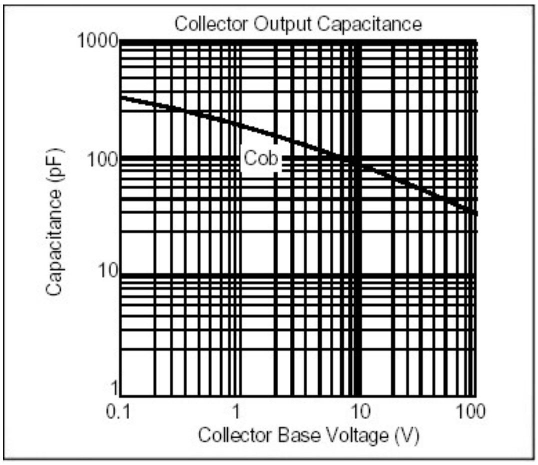


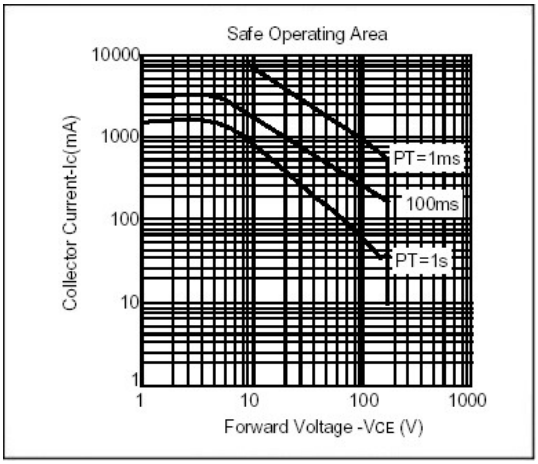











Safe Operating Area
Collector Current-Ic(mA)
10000
1000
100
10
1
1
10
100
1000
Forward Voltage -VCE (V)
PT=1ms
100ms
PT=1s