RoHS
COMPLIANT

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for auto matic Insertion

- Signal amplification
- Switching circuit

- SOT-563
- Tin plated leads, solderable per J-STD-002 and JESD22-B102

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Device marking code				Z1
Collector-base voltage	V_{CBO}	V	I_C=50uA,I_E=0	60
Collector-emitter voltage	V_{CEO}	V	I_C=1mA,I_B=0	50
Emitter-base voltage	V_{EBO}	V	I_E=50uA,I_C=0	7
Collector current	I_C	mA		150
Power dissipation	P_D	mW		150
Junction temperature	T_J	℃		-55 to +150
Storage temperature	T_{STG}	℃		-55 to +150

Collector-base voltage	V_{CBO}	V	I_C=-50uA,I_E=0	-60
Collector-emitter voltage	V_{CEO}	V	I_C=-1mA,I_B=0	-50
Emitter-base voltage	V_{EBO}	V	I_E=-50uA,IC=0	-6
Collector current	I_C	mA		-150
Power dissipation	P_D	mW		150
Junction temperature	T_J	℃		-55 to +150
Storage temperature	T_{STG}	℃		-55 to +150

■ (Ta=25 Unless otherwise specified)

Collector-base breakdown voltage	$V_{(BR)CBO}$	V	I_C=50uA,I_E=0	60		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	I_C=1mA,I_B=0	50		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E=50uA,I_C=0	7		
Collector cut-off current	I_{CBO}	nA	V_{CB}=60V,I_B=0			100
Emitter-base cutoff current	I_{EBO}	nA	V_{EB}=7V, I_C=0			100
DC current gain	h_{FE}		V_{CE}=6V,I_C=1mA	120		560
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	I_C=50mA,I_B=5mA			0.4
Transition frequency	f_T	MHz	V_{CE}=12V,I_C=-2mA,f=100MHz		180	
Output capacitance	Cob	pF	VCB=12V,IE=0A,f=1MHz		2	3.5

Collector-base breakdown voltage	$V_{(BR)CBO}$	V	I_C=-50uA,I_E=0	-60		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	I_C=-1mA,I_B=0	-50		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E=-50uA,I_C=0	-6		
Collector-base cut-off current	I_{CBO}	nA	V_{CB}=-60V,I_E=0			-100
Emitter-base cut-off current	I_{EBO}	nA	V_{EB}=-6V,I_C=0			-100
Dc current gain	h_{FE}		V_{CE}=-6V,I_C=-1mA	120		560
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	I_C=-50mA,I_B=-5mA			-0.5
Transition frequency	f_T	MHz	V_{CE}=-12V,I_E=2mA,f=100MHz		140	
Output capacitance	Cob	pF	V_{CB}=-12V,I_E=0A,f=1MHz			5

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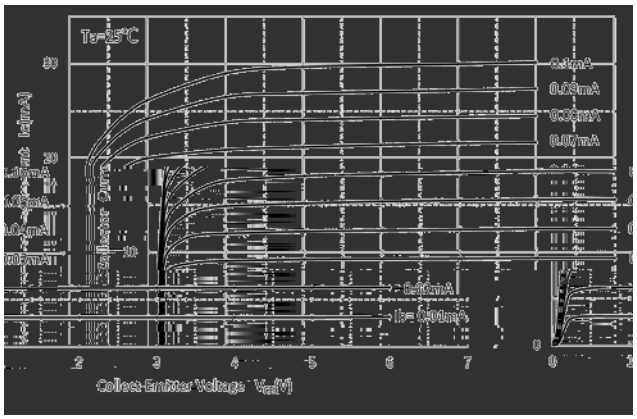
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	833
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	667

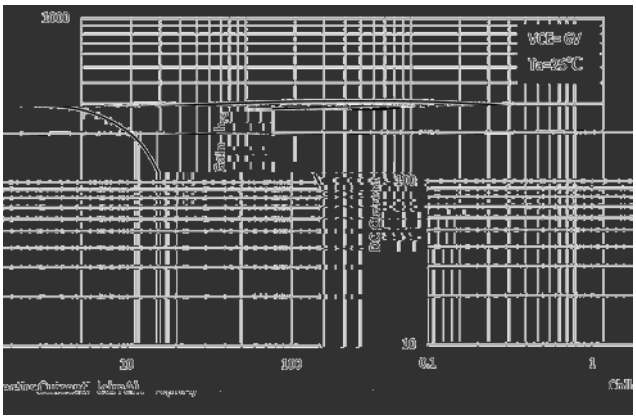
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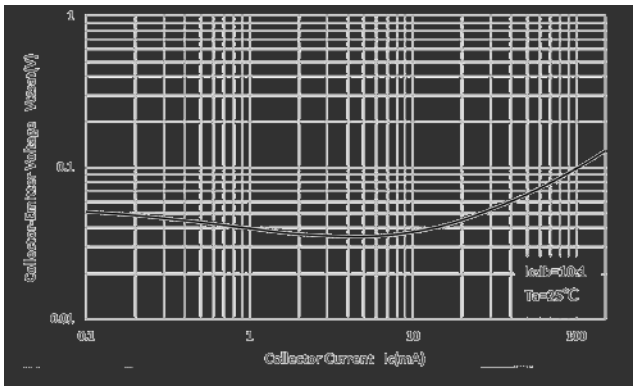
1 Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 25.4mm*25.4mm copper pad areas

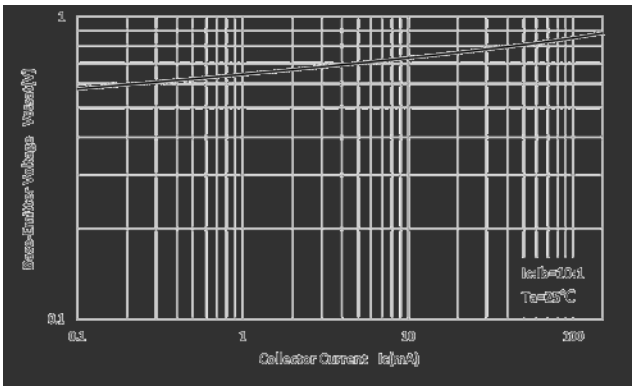
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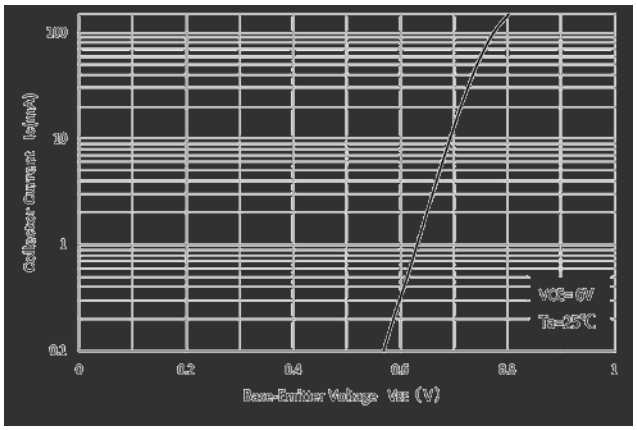
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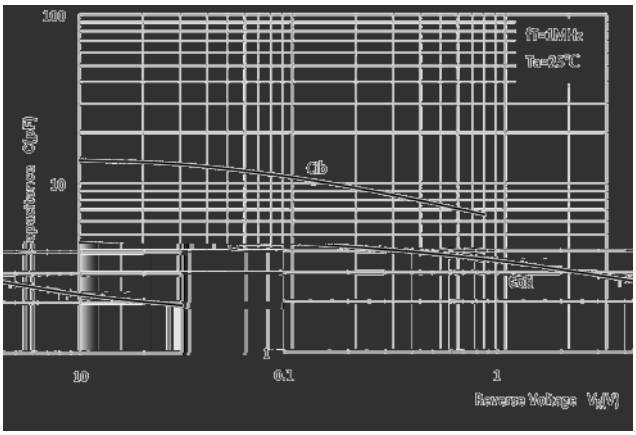


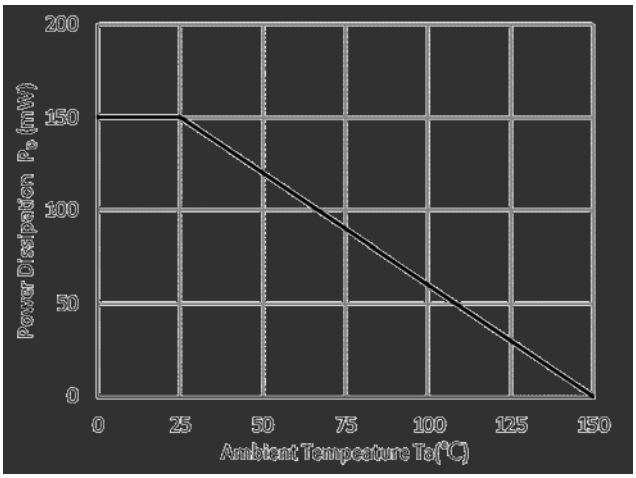


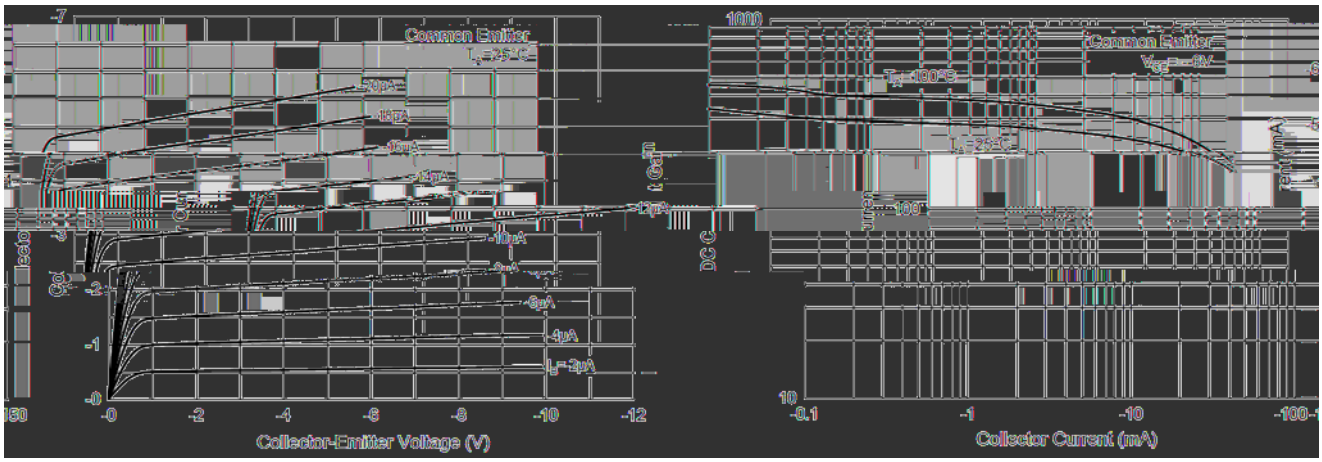




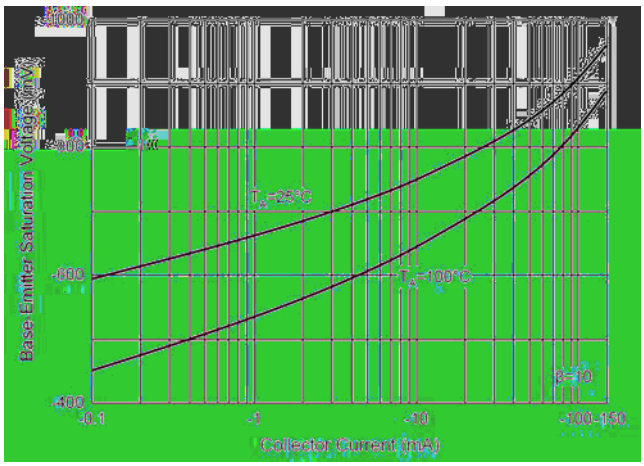





Power Dissipation Pc (mW)
200
150
100
50
0
0
25
50
75
100
125
150
Ambient Temperature Ta(°C)


Common Emitter
Collector-Emitter Voltage (V)
Collector Current (mA)
DC G



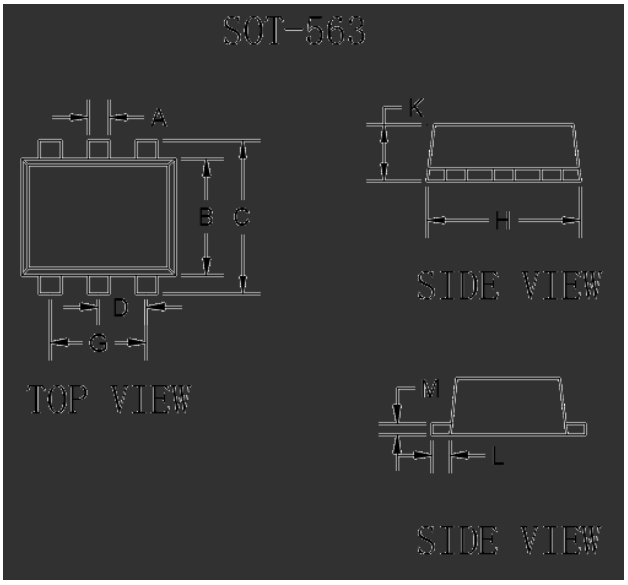

Base-Emitter Saturation Voltage (mV)
Collector Current (mA)

RoHS COMPLIANT

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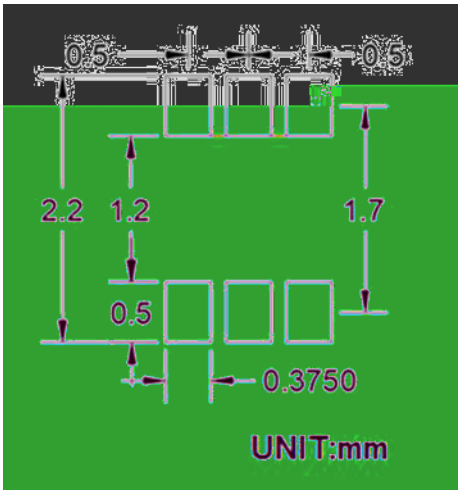
EMZ1	F2	Approximate 0.0035	3000	30000	120000	7” reel

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DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.006	0.011	0.150	0.300
B	0.043	0.051	1.100	1.300
C	0.059	0.067	1.500	1.700
D	0.016	0.024	0.400	0.600
G	0.035	0.043	0.900	1.100

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