

Features

- 2SC2412 and 2SA1037 are Housed Independently in a Package
- Mounting Cost and Area can be Cut in Half
- Transistor Elements Independent, Eliminating Interference
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

NPN Transistor

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	7	V
Continuous Collector Current	I_C	150	mA
Power Dissipation	P_D	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	833	°C/W

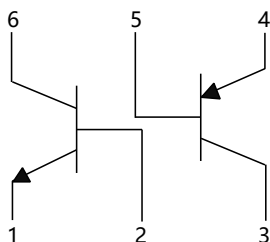
PNP Transistor

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Continuous Collector Current	I_C	-150	mA
Power Dissipation	P_D	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	833	°C/W

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

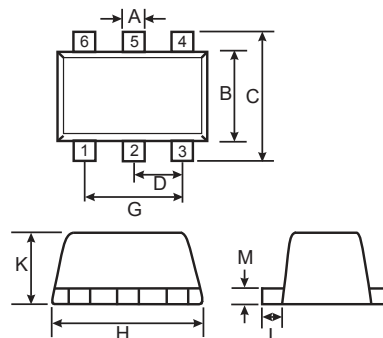
Marking: Z1

Internal Structure



Dual Transistors

SOT-563



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.006	0.011	0.15	0.30	
B	0.043	0.051	1.10	1.30	
C	0.059	0.067	1.50	1.70	
D	0.020		0.50		TYP.
G	0.035	0.043	0.90	1.10	
H	0.059	0.067	1.50	1.70	
K	0.022	0.026	0.55	0.65	
L	0.004	0.011	0.10	0.30	
M	0.004	0.007	0.10	0.18	

Electrical Characteristics @ T_A=25°C Unless Otherwise Specified
NPN Transistor

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	60			V	I _C =50μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	50			V	I _C =1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	7			V	I _E =50μA, I _C =0
Collector Cutoff Current	I _{CBO}			100	nA	V _{CB} =60V, I _E =0
Emitter Cutoff Current	I _{EBO}			100	nA	V _{EB} =7V, I _C =0
DC Current Gain	h _{FE}	120		560		V _{CE} =6V, I _C =1mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}			0.4	V	I _C =50mA, I _B =5mA
Transition Frequency	f _T		180		MHz	V _{CE} =12V, I _C =2mA, f=100MHz
Output Capacitance	C _{ob}		2	3.5	pF	V _{CB} =12V, I _E =0, f=1MHz

PNP Transistor

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-60			V	I _C =-50μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-50			V	I _C =-1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-6			V	I _E =-50μA, I _C =0
Collector Cutoff Current	I _{CBO}			-100	nA	V _{CB} =-60V, I _E =0
Emitter Cutoff Current	I _{EBO}			-100	nA	V _{EB} =-6V, I _C =0
DC Current Gain	h _{FE}	120		560		V _{CE} =-6V, I _C =-1mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}			-0.50	V	I _C =-50mA, I _B =-5mA
Transition Frequency	f _T		140		MHz	V _{CE} =-12V, I _C =-2mA, f=100MHz
Output Capacitance	C _{ob}			5	pF	V _{CB} =-12V, I _E =0, f=1MHz

Curve Characteristics(NPN)

Fig. 1 - Static Characteristics

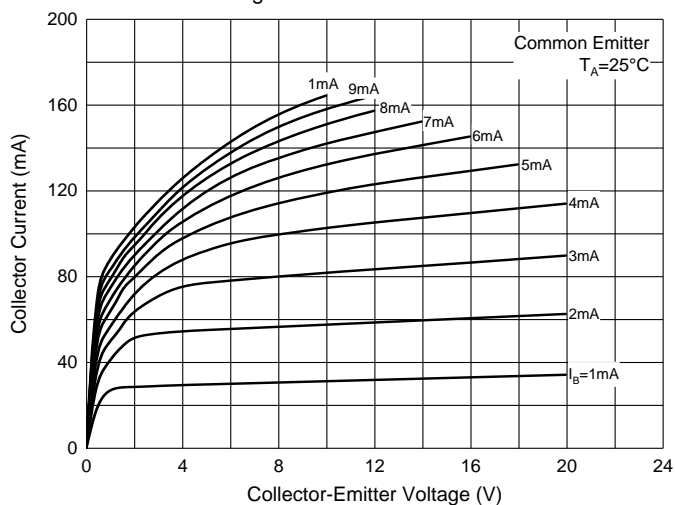


Fig. 2 - DC Current Gain Characteristics

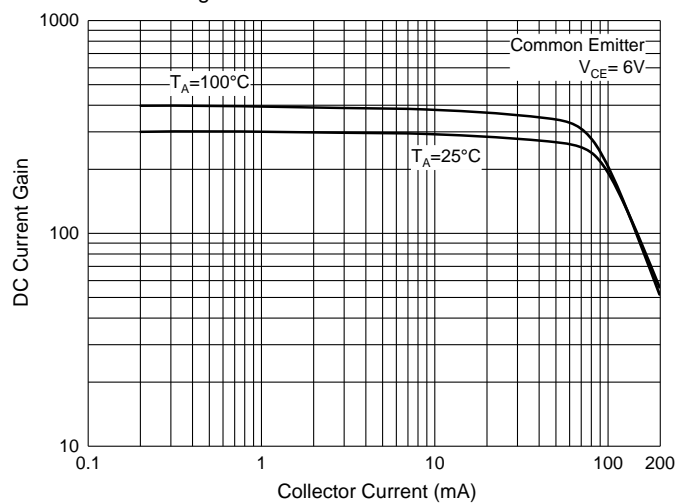


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

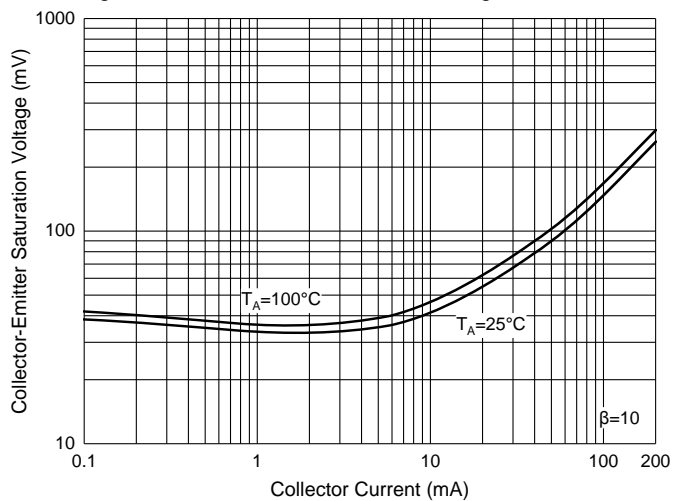


Fig. 4 - Base-Emitter Voltage Characteristics

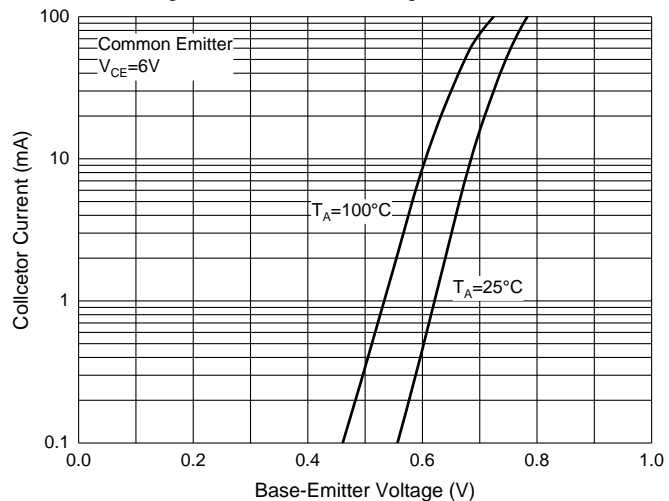
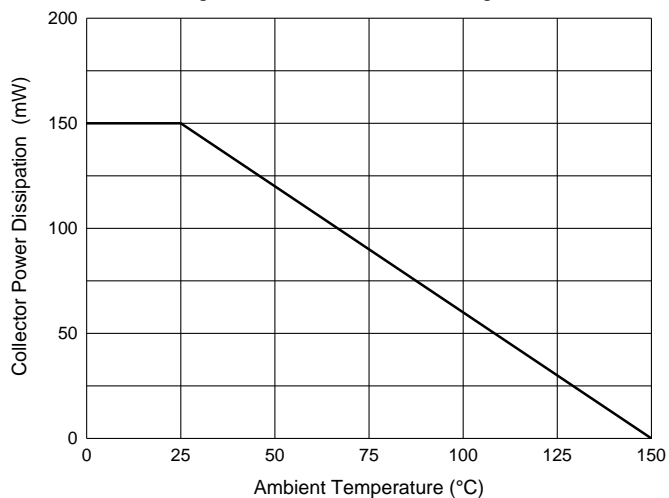


Fig. 5 - Collector Power Derating Curve



Curve Characteristics(PNP)

Fig. 6 - Static Characteristics

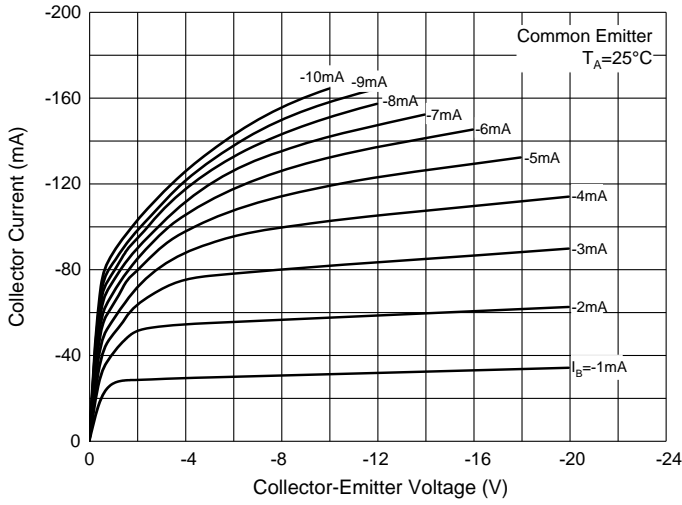


Fig. 7 - DC Current Gain Characteristics

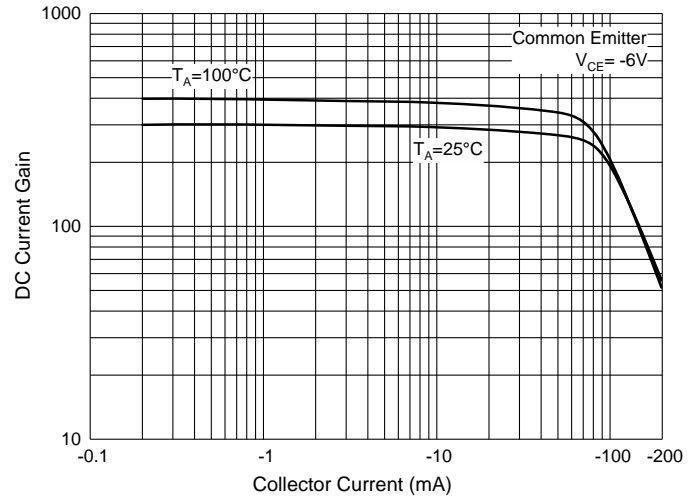


Fig. 8 - Collector-Emitter Saturation Voltage Characteristics

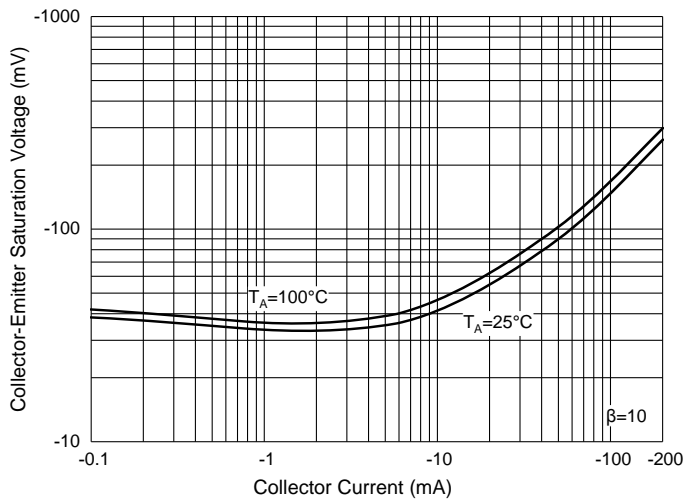


Fig. 9 - Base-Emitter Voltage Characteristics

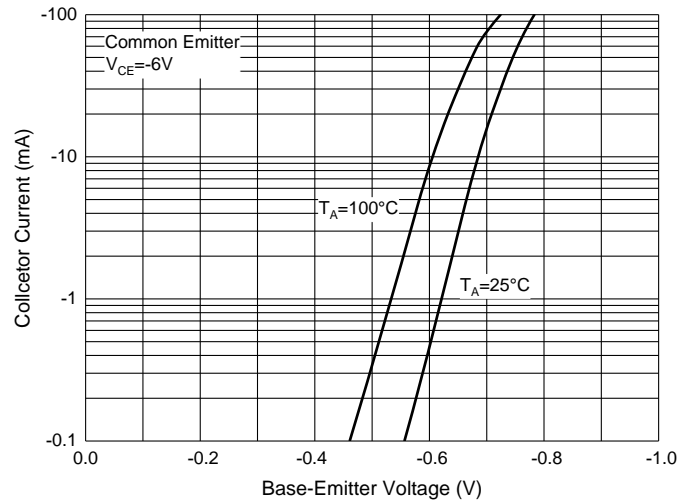
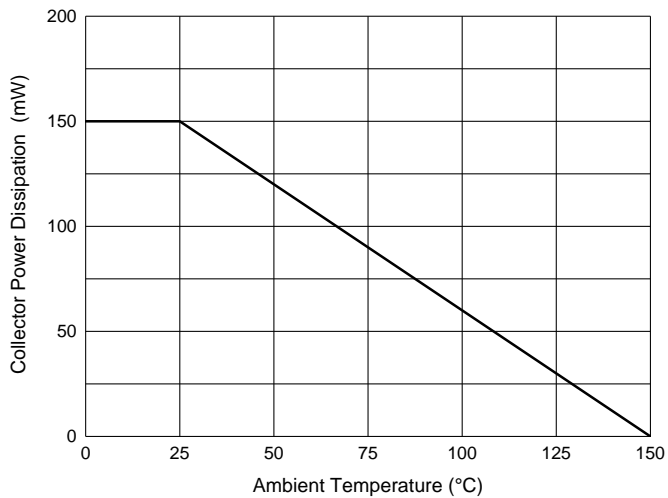


Fig. 10 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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