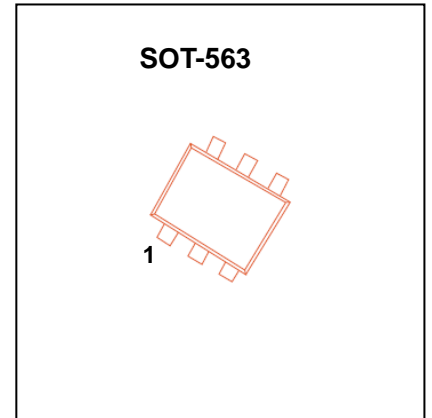


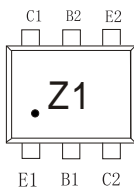
Dual NPN+PNP transistors

FEATURES

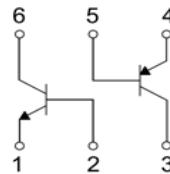
- FTC2412 and FTA1037 are housed independently in a package
- Transistor elements independent, eliminating interference
- Mounting cost and area can be cut in half



Marking: Z1



Equivalent circuit



TR1 NPN and TR2 PNP Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value		Unit
		TR1	TR2	
V_{CBO}	Collector- Base Voltage	60	- 60	V
V_{CEO}	Collector- Emitter Voltage	50	- 50	V
V_{EBO}	Emitter- Base Voltage	7	- 6	V
I_C	Collector Current	150	-150	mA
P_C	Collector Power Dissipation	150(Total)*		mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833		$^{\circ}\text{C}/\text{W}$
T_J	Junction Temperature	150		$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	- 55~ +150		$^{\circ}\text{C}$

*120mW per element must not be exceeded



EMZ1

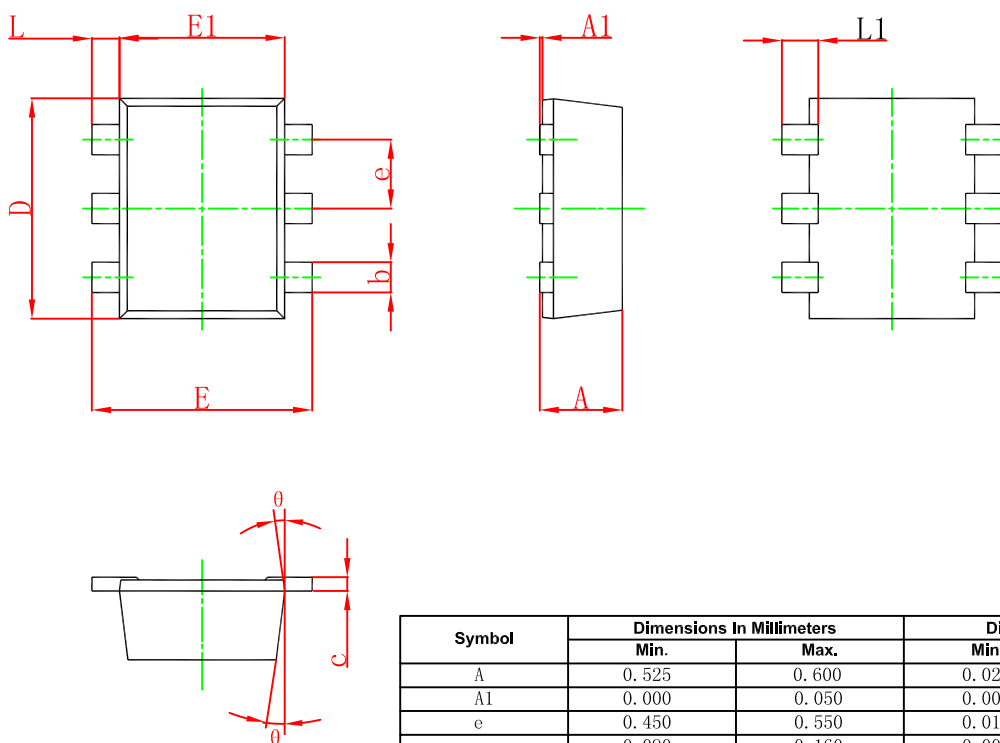
TR1 NPN ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{(BR)CBO}	I _C =50μA, I _E =0	60			V
Collector- emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	50			V
Emitter- base breakdown voltage	V _{(BR)EBO}	I _E =50μA, I _C =0	7			V
Collector cut- off current	I _{CBO}	V _{CB} =60V, I _E =0			0.1	μA
Emitter cut- off current	I _{EBO}	V _{EB} =7V, I _C =0			0.1	μA
DC current gain	h _{FE}	V _{CE} =6V, I _C =1mA	120		560	
Collector- emitter saturation voltage	V _{CE(sat)}	I _C =50mA, I _B =5mA			0.4	V
Transition frequency	f _T	V _{CE} =12V, I _C =2mA, f=100MHz		180		MHz
Collector output capacitance	C _{ob}	V _{CB} =12V, I _E =0, f=1MHz			3.5	pF

TR2 PNP ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

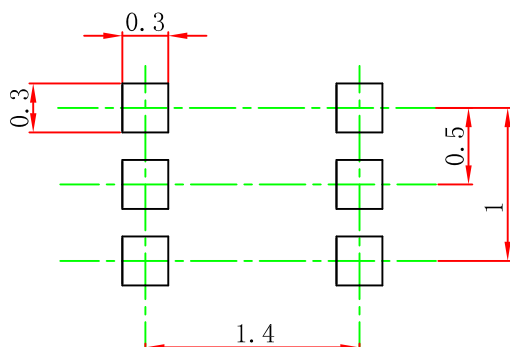
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-60			V
Collector- emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-50			V
Emitter- base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-6			V
Collector cut- off current	I _{CBO}	V _{CB} =-60V, I _E =0			-0.1	μA
Emitter cut- off current	I _{EBO}	V _{EB} =-6V, I _C =0			-0.1	μA
DC current gain	h _{FE}	V _{CE} =-6V, I _C =-1mA	120		560	
Collector- emitter saturation voltage	V _{CE(sat)}	I _C =-50mA, I _B =-5mA			-0.5	V
Transition frequency	f _T	V _{CE} =-12V, I _C =-2mA, f=100MHz		140		MHz
Collector output capacitance	C _{ob}	V _{CB} =-12V, I _E =0, f=1MHz			5	pF

SOT- 563 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7 °REF.		7 °REF.	

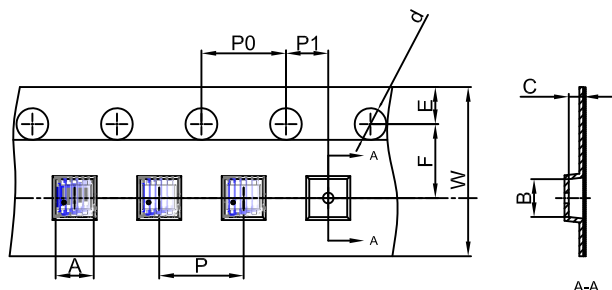
SOT- 563 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

SOT-563 Tape and Reel

SOT-563 Embossed Carrier Tape

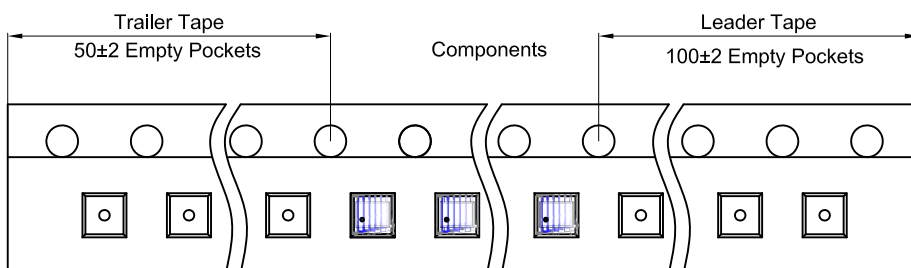


Packaging Description:

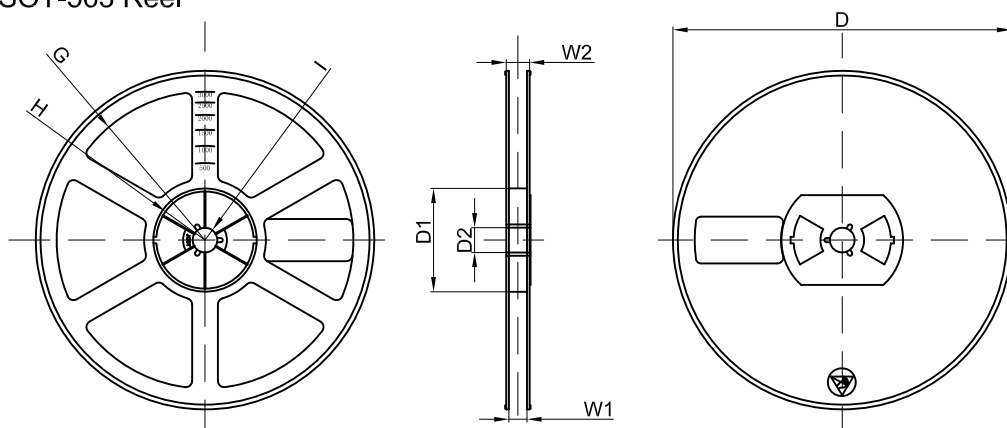
SOT-563 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-563	1.78	1.78	0.69	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-563 Tape Leader and Trailer



SOT-563 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	