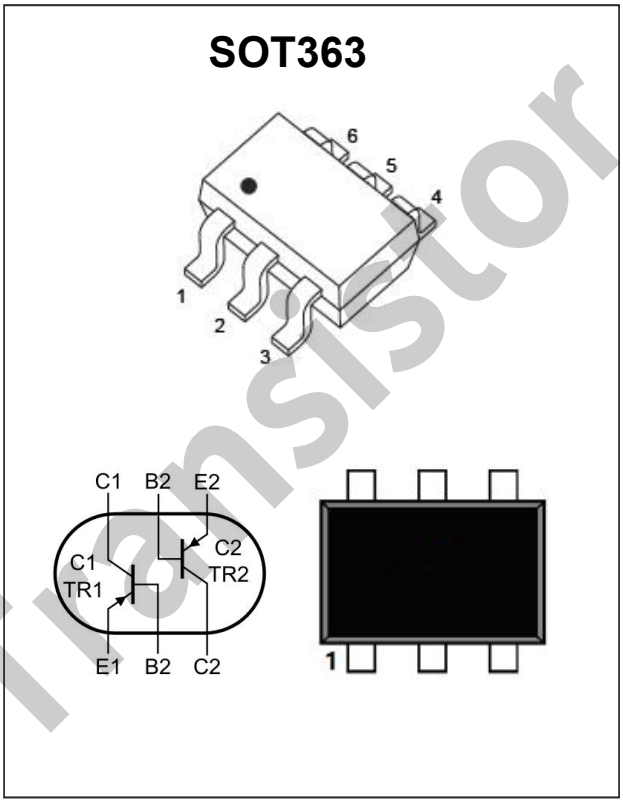
Dual PNP Transistor

PRIMARY CHARACTERISTICS				
VCEO	IC	VCE(sat)	fT	Tjmax
-150V	-200mA	-0.50V	100MHz	150℃



Features

- Epitaxial Planar Die Construction
- Complementary NPN Type Available (MMDT5551)
- Ideal for Medium Power Amplification and Switching
- RoHS Compliant and Halogen Free
- Dual PNP Transistor in SOT-363 Package
- Marking: K4M

Mechanical Data

- Package: SOT-363
- Mounting Style: Surface Mount
- Terminals: 6, Gull Wing
- Package Outline: JEDEC MO-203 Variation AB

Absolute Maximum Ratings (Ta=25℃ unless otherwise noted)

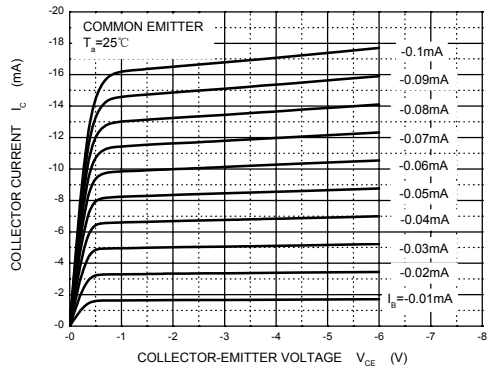
Parameters	Symbols	Limits	Units
Collector-Base Voltage	VCBO	-160	V
Collector-Emitter Voltage	VCEO	-150	V
Emitter -Base Voltage	VEBO	-5	V
Collector Current-Continuous	IC	-200	mA
Collector Power Dissipation	PC	200	mW
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55~+150	℃

Electrical Characteristics(Ta=25℃ unless otherwise noted)

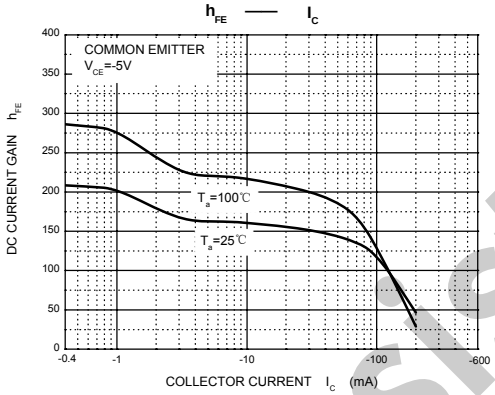
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC=-100μA,IE=0	-160	-	-	V
Collector-emitter breakdown voltage	V(BR)CEO	IC=-1mA,IB=0	-150	-	-	V
Emitter-base breakdown voltage	V(BR)EBO	IE=-10μA,IC=0	-5	-	-	V
Collector cut-off current	ICBO	VCB=-120V,IE=0	-	-	-50	nA
Emitter cut-off current	IEBO	VEB=-3V,IC=0	-	-	-50	nA
DC current gain	hFE(1)	VCE=-5V,IC=-1mA	-	50	-	
	hFE(2)	VCE=-5V,IC=-10mA	100	-	300	
	hFE(3)	VCE=-5V,IC=-50mA	50	-	-	
Collector-emitter saturation voltage	VCE(sat)	IC=-10mA,IB=-1mA	-	-	-0.2	V
		IC=-50mA,IB=-5mA	-	-	-0.5	V
Base -emitter saturation voltage	VBE(sat)	IC=-10mA,IB=-1mA	-	-	-1	V
		IC=-50mA,IB=-5mA	-	-	-1	V
Transition frequency	fT	VCE=-10V,IC=-10mA,f=100MHz	-	100	-	MHz
Collector output capacitance	Cob	VCB=-10V,IE=0,f=1MHz	-	6	-	pF
Noise Figure	NF	CE= -5.0V, IC= -200μA, RS= 10Ω,f = 1.0kHz	-	-	8.0	dB

Typical Characteristics

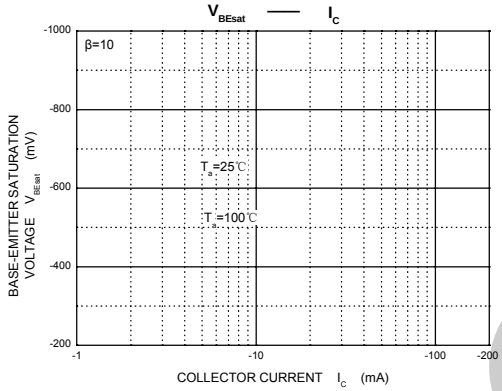
Static Characteristic



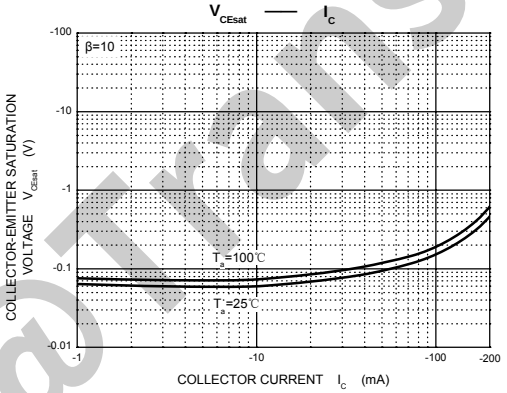
h_{FE} — I_C



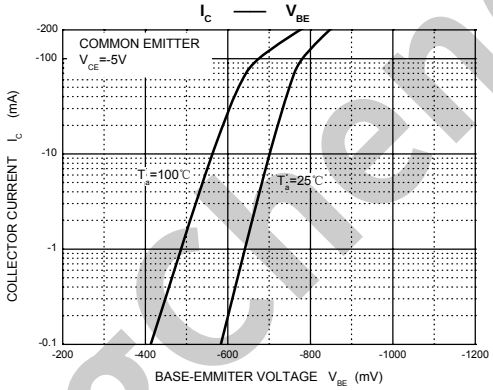
V_{BEsat} — I_C



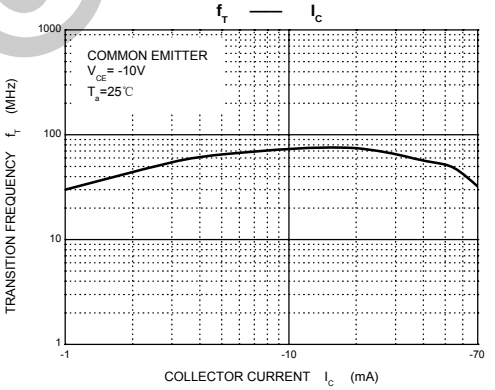
V_{CEsat} — I_C



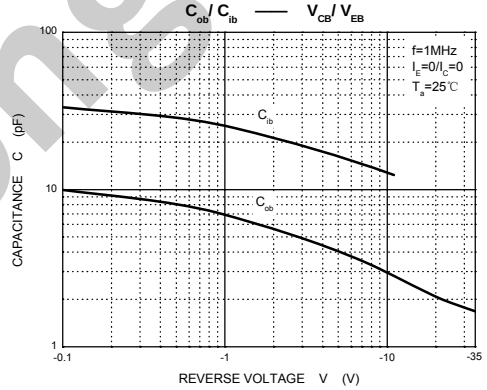
I_C — V_{BE}



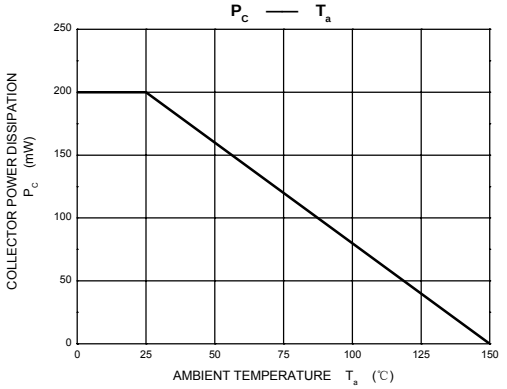
f_T — I_C



C_{ob} / C_{ib} — V_{CB} / V_{EB}

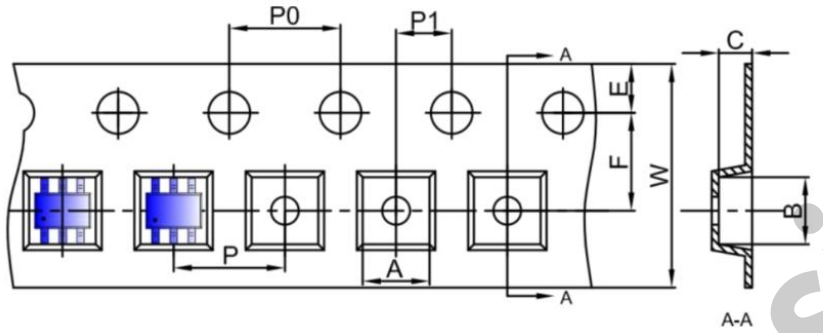


P_C — T_a

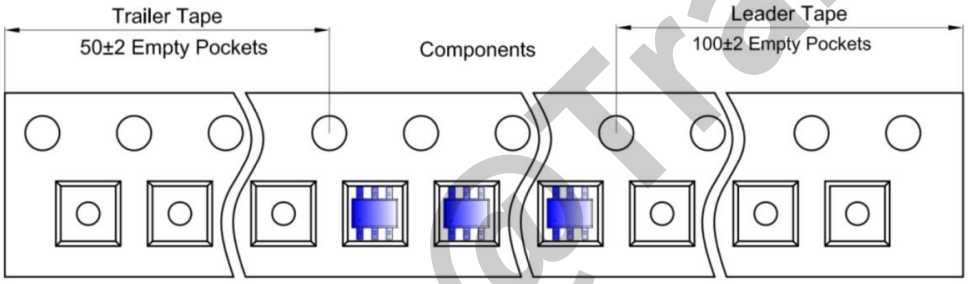


Package Information

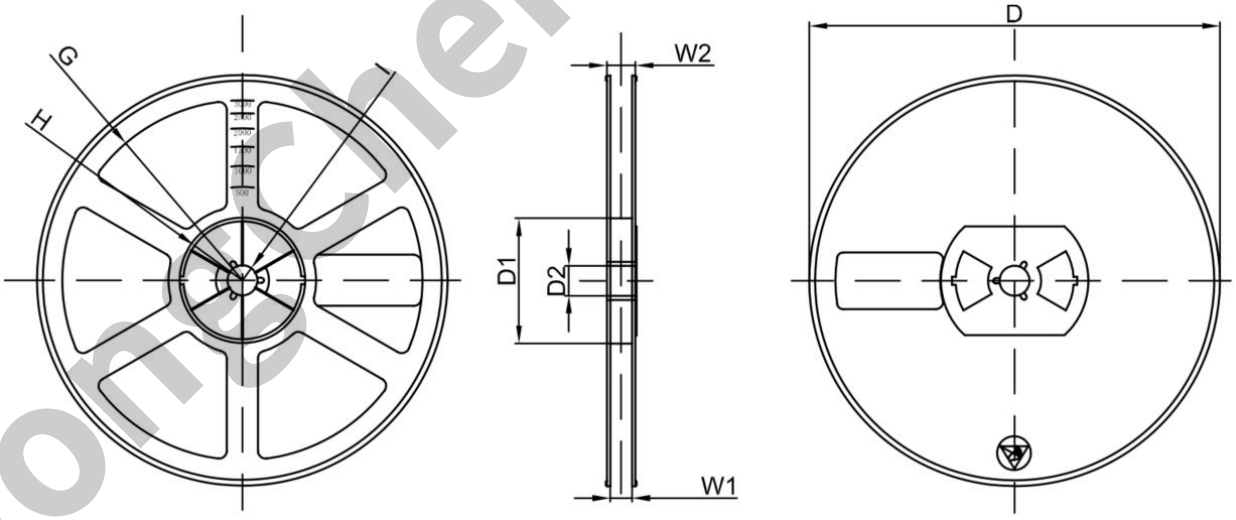
Carrier Dimension(mm)



Dimensions are in millimeter										
Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00



Reel Dimension(mm)



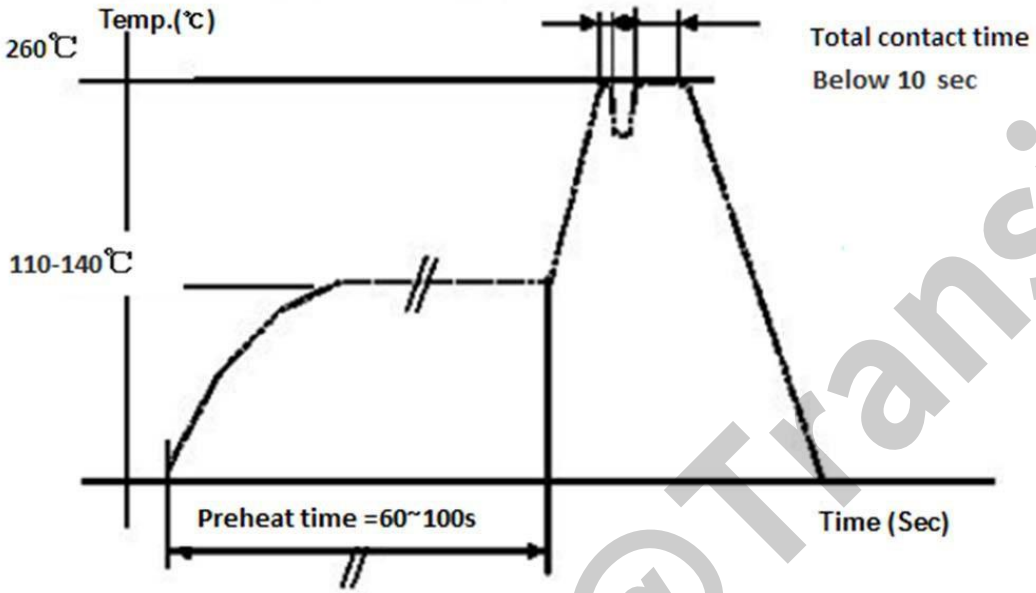
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

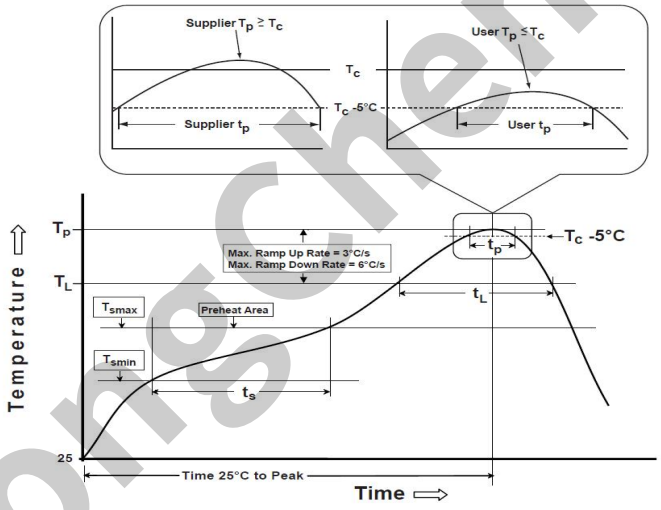
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT363	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020



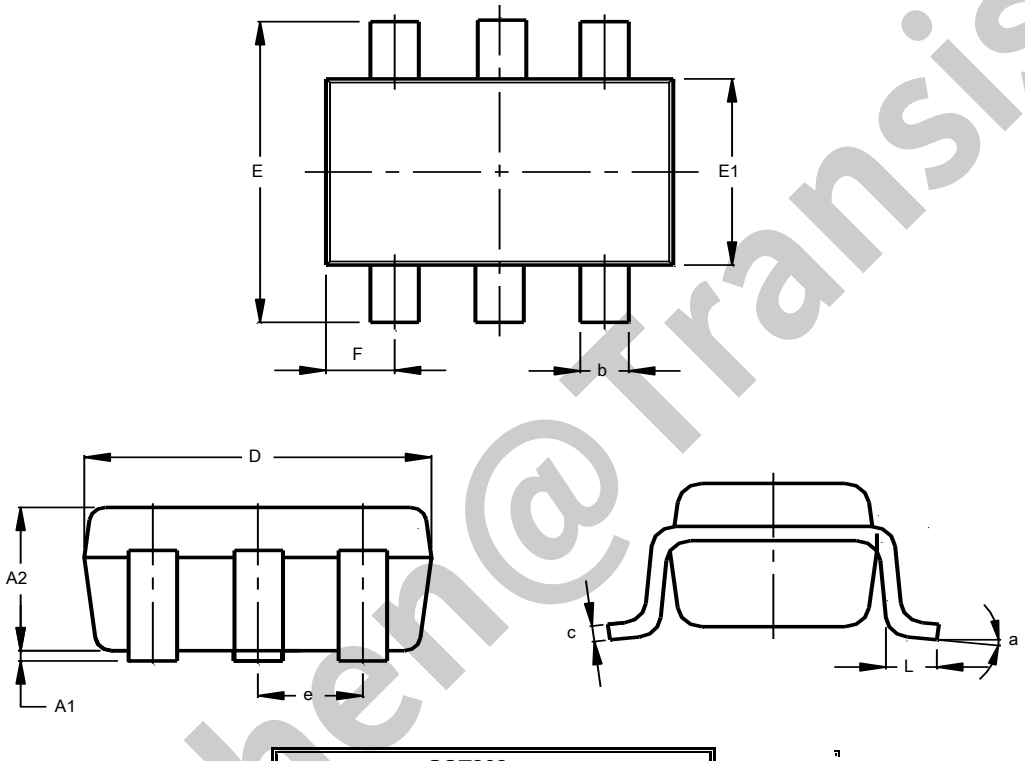
Preheat/Soak Temperature Min (Tsmin) Temperature Max (Tsmax) Time (ts) from (Tsmin to Tsmax)	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217℃
Ramp-up Rate to 217℃(Melting Point of Solder)	3℃/sec
Time at Temp.>217℃ (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5℃
Time within 5℃below Peak Temp.	20~40 Sec
Cooling Rate	6℃/sec (max)
Time from 25℃ to Peak Temp.	8min (max)

c) Manual Soldering

When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Outline Drawing

SOT-363

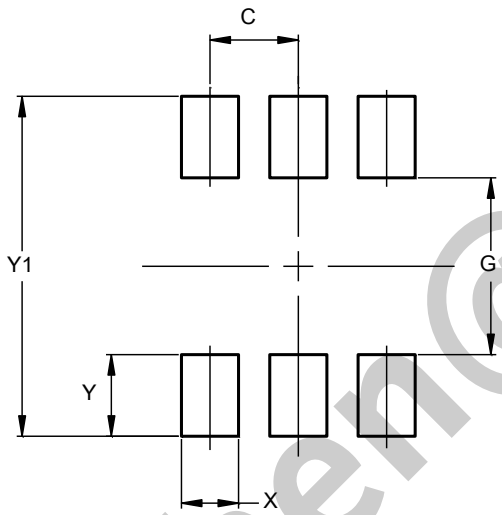


SOT363			
Dim	**Min**	**Max**	**Typ**
A1	0.00	0.10	0.05
A2	0.90	1.00	0.95
b	0.10	0.30	0.25
c	0.10	0.22	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
F	0.40	0.45	0.425
L	0.25	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Dimensions in inches and (millimeters)

Suggested Soldering Pad Layout

SOT-363



Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500

Dimensions in inches and (millimeters)

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