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ESD



TVS



TSS



MOV

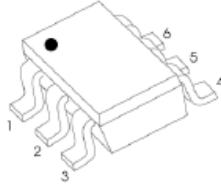
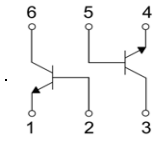


GDT



PLED

Product data sheet


SOT-363

MMDT3904

DUAL TRANSISTOR (NPN+NPN)

FEATURES

- Epitaxial planar die construction
- Ideal for low power amplification and switching

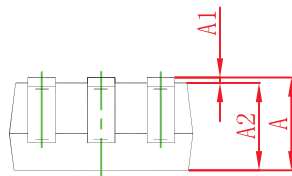
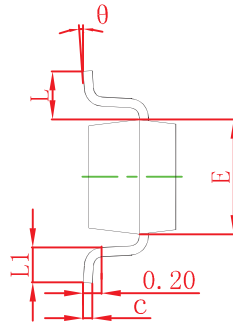
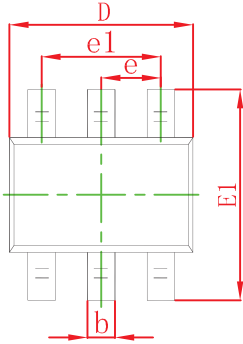
MARKING:K6N
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	0.2	A
P _C	Collector Power Dissipation	0.2	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

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

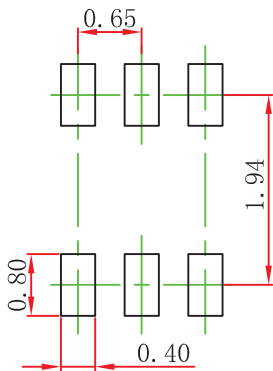
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =10μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			0.05	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.05	μA
Collector cut-off current	I _{CEX}	V _{CE} =30V, V _{BE(off)} =3V			0.05	μA
DC current gain	h _{FE(1)}	V _{CE} =1V, I _C =0.1mA	40			
	h _{FE(2)}	V _{CE} =1V, I _C =1mA	70			
	h _{FE(3)}	V _{CE} =1V, I _C =10mA	100		300	
	h _{FE(4)}	V _{CE} =1V, I _C =50mA	60			
	h _{FE(5)}	V _{CE} =1V, I _C =100mA	30			
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =10mA, I _B =1mA			0.2	V
	V _{CE(sat)2}	I _C =50mA, I _B =5mA			0.3	V
Base-emitter saturation voltage	V _{BE(sat)1}	I _C =10mA, I _B =1mA	0.65		0.85	V
	V _{BE(sat)2}	I _C =50mA, I _B =5mA			0.95	V
Transition frequency	f _T	V _{CE} =20V, I _C =10mA, f=100MHz	300			MHz
Collector output capacitance	C _{ob}	V _{CB} =5V, I _E =0, f=1MHz			4	pF
Noise figure	NF	V _{CE} =5V, I _C =0.1mA, f=1kHz, R _S =1KΩ			5	dB
Delay time	t _d	V _{CC} =3V, V _{BE(off)} =-0.5V			35	nS
Rise time	t _r	I _C =10mA, I _{B1} =-I _{B2} =1mA			35	nS
Storage time	t _s	V _{CC} =3V, I _C =10mA			200	nS
Fall time	t _f	I _{B1} =-I _{B2} =1mA			50	nS

SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
MMDT3904	SOT-363	3000

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