

(NPN+NPN) Silicon NPN Epitaxial Planer Transistor

Feature

Pb-Free Package is available.

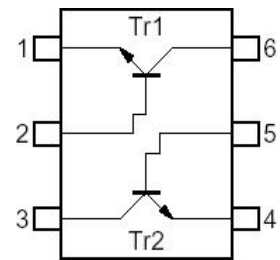
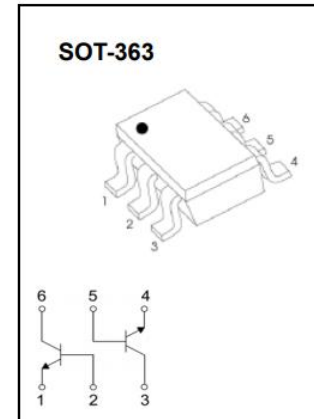
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MAXIMUM RATINGS

Parameter	Symbol	Ratings	Unit
Collector-Emitter Voltage	V_{CEO}	50	V
Collector-Base Voltage	V_{CBO}	60	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector current-continuoun	I_C	150	mAdc

THERMAL CHARATEERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A=25^{\circ}C$	P_D	380	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	328	$^{\circ}C/W$
Junction and Storage Temperature	T_j, T_{stg}	-55 to +150	$^{\circ}C$



ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}C$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C=1mA$)	$V(BR)_{CEO}$	50	-	-	V
Emitter-Base Breakdown Voltage ($I_E=50 A$)	$V(BR)_{EBO}$	7	-	-	V
Collector-Base Breakdown Voltage ($I_C=50 A$)	$V(BR)_{CBO}$	60	-	-	V
Collector Cutoff Current ($V_{CB}=60V$)	I_{CBO}	-	-	0.1	μA

EMITTER CUTOFF CURRENT $V_{EB}=7V$	I_{EBO}	-	-	0.1	μA
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ON CHARACTERISTICS

DC Current Gain ($I_C=1mA, V_{CE}=6.0V$)	H_{fe}	120	-	560	
Collector-Emitter Saturation Voltage ($I_C=50mA, I_B=5mA$)	$V_{CE(SAT)}$	-	-	0.4	V

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product ($V_{CE} = 12.0V; I_E = -2.0 mA, f=100MHZ$)	F_t	-	180	-	MHz
Output Capacitance($V_{CE}=12V, f=1.0MHZ$)	C_{obo}	-	2	3.5	Pf



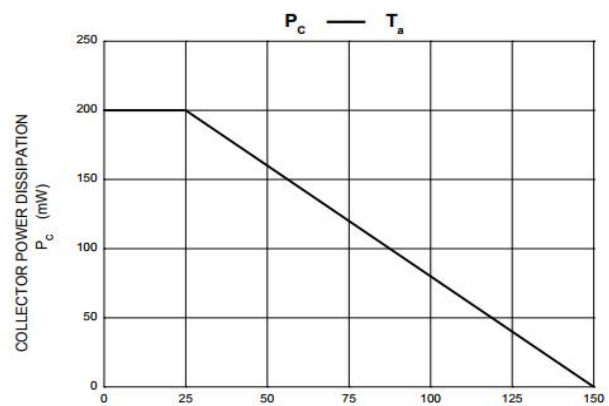
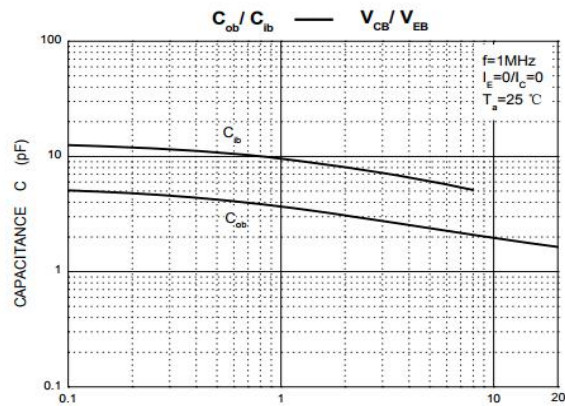
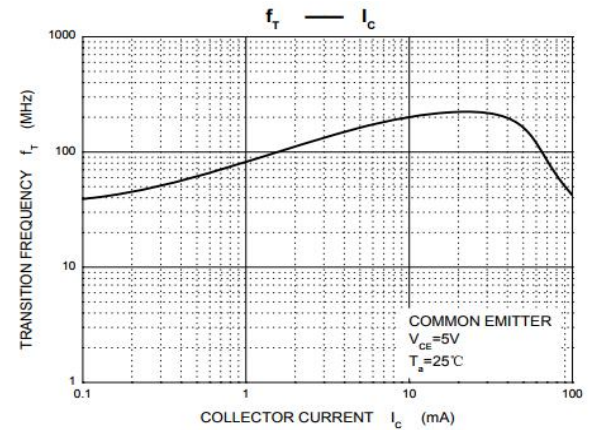
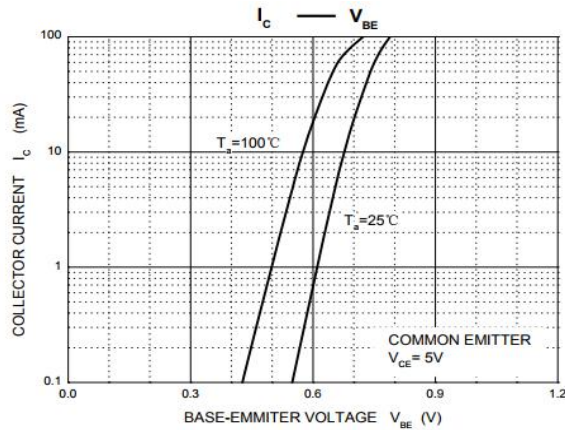
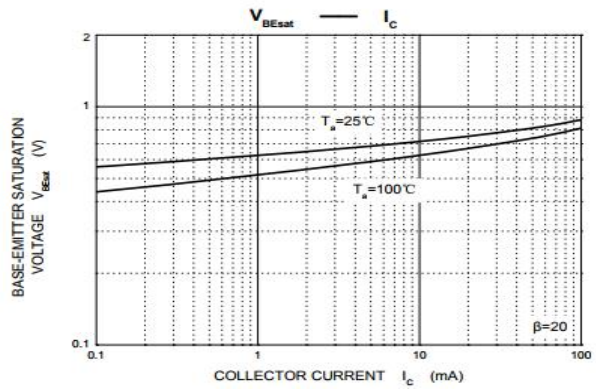
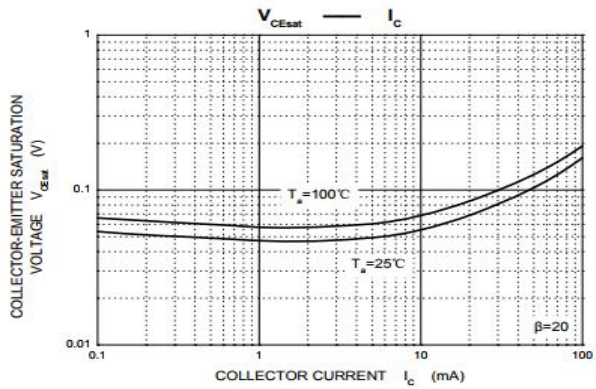
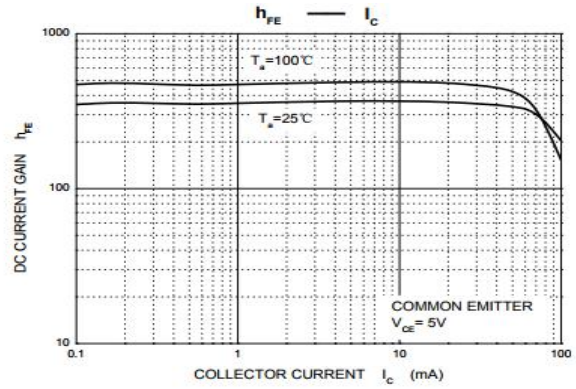
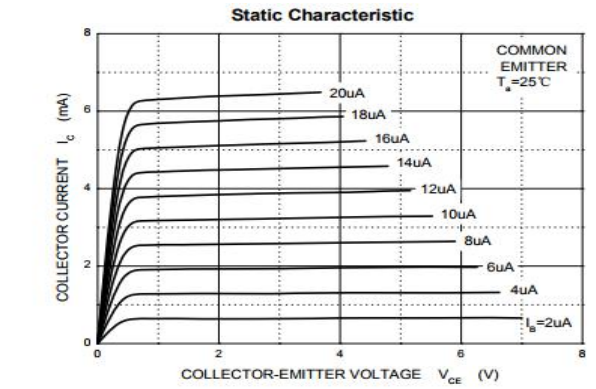
CHINA BASE
INTERNATIONAL

SOT-363



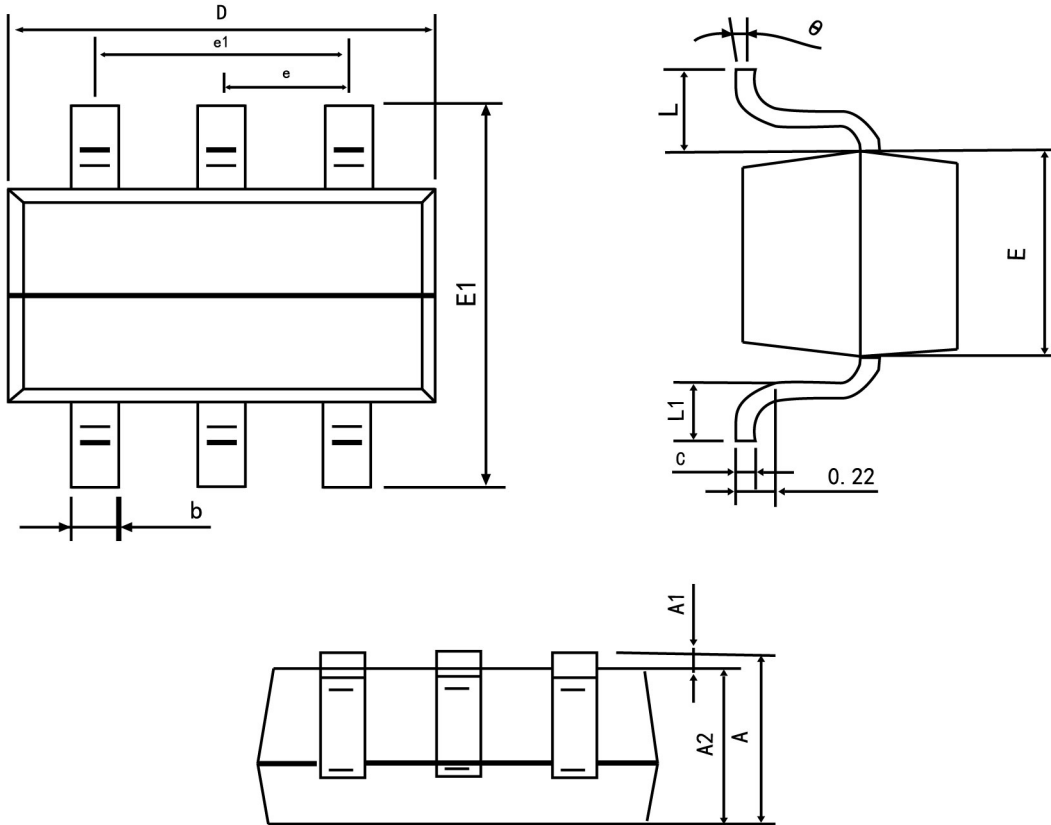
MMDT4501DW

www.china-base.com.hk





SOT-363-Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°