

MMDT5551 Multi-Chip TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM} : 0.2 W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 0.2 A

Collector-base voltage

$V_{(BR)CBO}$: 180 V

Operating and storage junction temperature range

T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=120V, I_E=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=1mA$	80			
	$h_{FE(2)}$	$V_{CE}=5V, I_C=10mA$	80		250	
	$h_{FE(3)}$	$V_{CE}=5V, I_C=50mA$	30			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=10mA, I_B=1mA$			0.15	V
	$V_{CE(sat)(2)}$	$I_C=50mA, I_B=5mA$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)(1)}$	$I_C=10mA, I_B=1mA$			1	V
	$V_{BE(sat)(2)}$	$I_C=50mA, I_B=5mA$			1	V
Transition frequency	f_T	$V_{CE}=10V, I_C=10mA, f=100MHz$	100		300	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			6	pF
Noise figure	NF	$V_{CE}=5V, I_C=200\mu A, f=1KHz, R_g=1K\Omega$			8	dB

CLASSIFICATION OF $h_{FE(1)}$

Marking	K4N
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