DUAL TRANSISTOR (NPN+NPN)

SOT-363

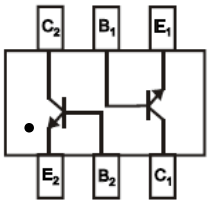
FEATURES

- Epitaxial Planar Die Construction
- Complementary PNP Type Available(MMDT5401)
- Ideal for Medium Power Amplification and Switching

MRKING:K4N

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector- Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Power Dissipation	0.2	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃



ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,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=10μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=120V, I_E=0			0.05	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			0.05	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5 V, I_C=1mA	80			
	$h_{FE(2)}$	V_{CE}=5 V, I_C=10mA	100		300	
	$h_{FE(3)}$	V_{CE}=5 V, 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
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz			6	pF
Noise Figure	NF	V_{CE}=5V, I_C=0.2mA, R_S=1KΩ,f =1kHz			8	dB

Typical Characteristics

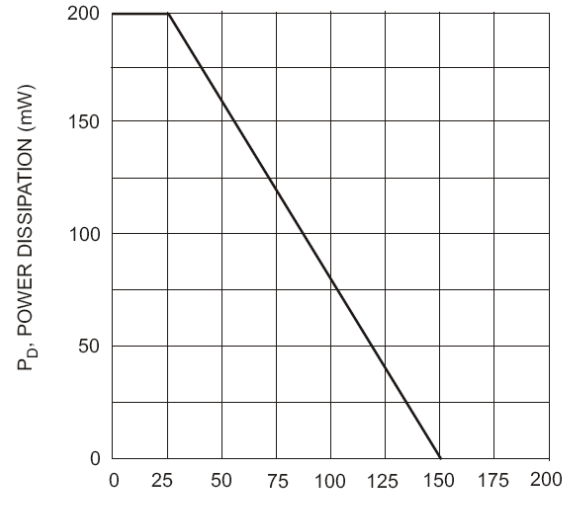


Fig. 1, Max Power Dissipation vs Ambient Temperature

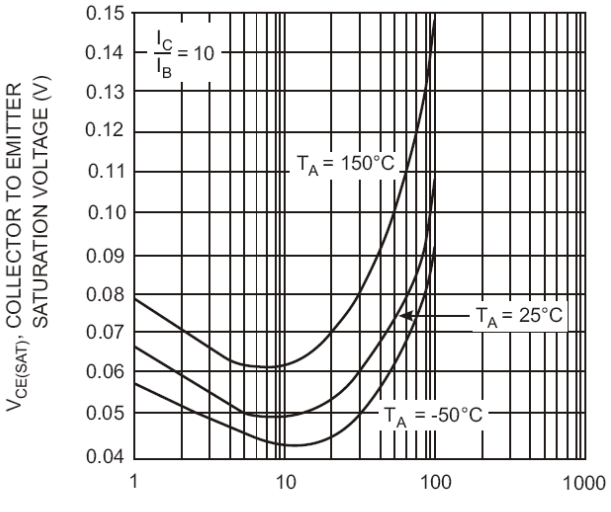


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

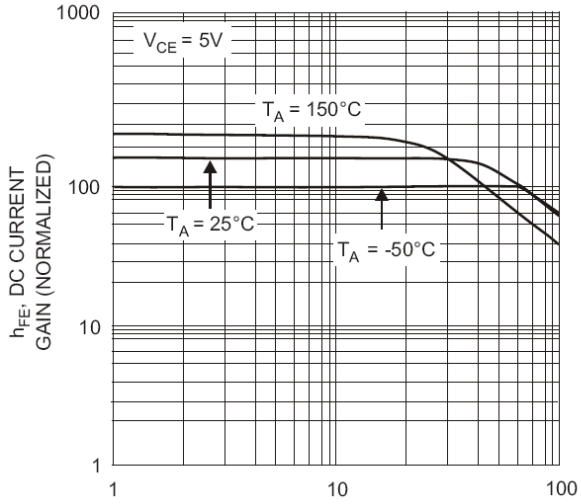


Fig. 3, DC Current Gain vs Collector Current

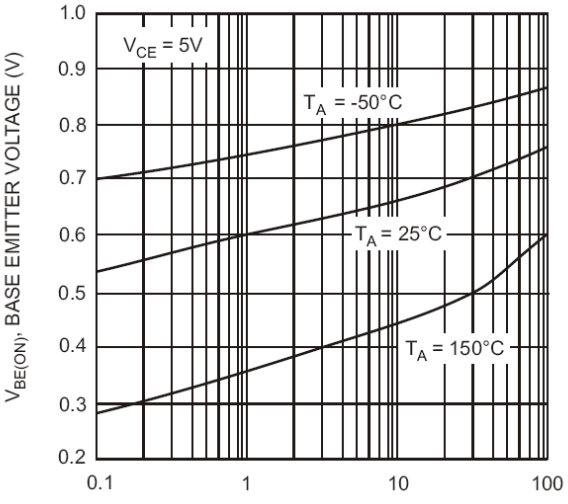


Fig. 4, Base Emitter Voltage vs. Collector Current

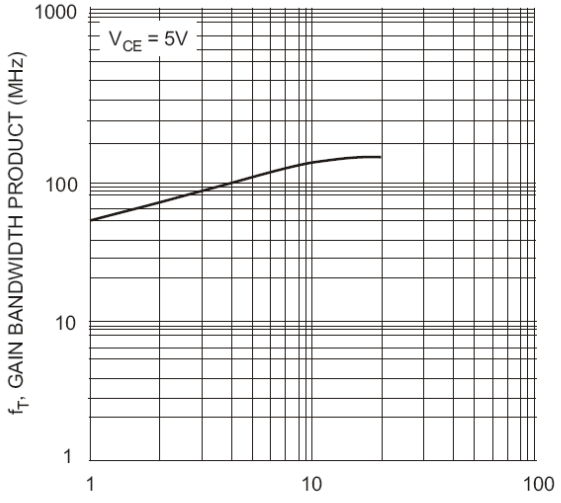


Fig. 5, Gain Bandwidth Product vs. Collector Current