



YOUSHANG SEMICONDUCTOR

设计研发新型功率器件

各类小信号开关

中低压及高压大电流等场效应管

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企业微信二维码



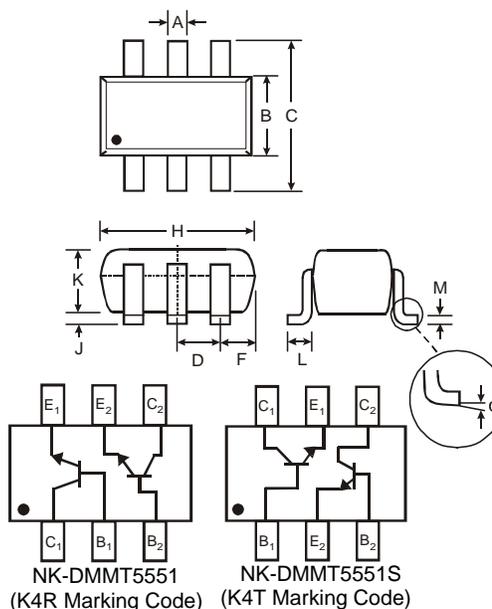
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Features

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (NK-DMMT5401)
- Ideal for Low Power Amplification and Switching
- Intrinsically Matched NPN Pair (Note 1)
- 2% Matched Tolerance, h_{FE} , $V_{CE(SAT)}$, $V_{BE(SAT)}$

Mechanical Data

- Case: SOT-26
- Case Material: Molded Plastic, "Green" Molding Compound, Note 7. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: See Diagram
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Copper leadframe).
- Marking Information: K4R & K4T, See Page 3
- Ordering & Date Code Information: See Page 3
- Weight: 0.006 grams (approximate)



SOT-26			
Dim	Min	Max	Typ
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	—	—	0.95
F	—	—	0.55
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
α	0°	8°	—
All Dimensions in mm			

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	180	V
Collector-Emitter Voltage	V_{CE0}	160	V
Emitter-Base Voltage	V_{EB0}	6.0	V
Collector Current - Continuous (Note 2)	I_C	200	mA
Power Dissipation (Note 2, 3)	P_d	300	mW
Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

@T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)					
Collector-Base Breakdown Voltage	V _{(BR)CBO}	180	—	V	I _C = 100μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	160	—	V	I _C = 1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	6.0	—	V	I _E = 10μA, I _C = 0
Collector Cutoff Current	I _{CBO}	—	50	nA	V _{CB} = 120V, I _E = 0
Emitter Cutoff Current	I _{EBO}	—	50	nA	V _{CB} = 120V, I _E = 0, T _A = 100°C
ON CHARACTERISTICS (Note 7)					
DC Current Gain (Note 8)	h _{FE}	80 80 30	— 250 —	—	I _C = 1.0mA, V _{CE} = 5.0V I _C = 10mA, V _{CE} = 5.0V I _C = 50mA, V _{CE} = 5.0V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	0.15 0.20	V	I _C = 10mA, I _B = 1.0mA I _C = 50mA, I _B = 5.0mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	—	1.0	V	I _C = 10mA, I _B = 1.0mA I _C = 50mA, I _B = 5.0mA
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C _{obo}	—	6.0	pF	V _{CB} = 10V, f = 1.0MHz, I _E = 0
Small Signal Current Gain	h _{FE}	50	250	—	V _{CE} = 10V, I _C = 1.0mA, f = 1.0kHz
Current Gain-Bandwidth Product	f _T	100	300	MHz	V _{CE} = 10V, I _C = 10mA, f = 100MHz
Noise Figure	NF	—	8.0	dB	V _{CE} = 5.0V, I _C = 200μA, R _S = 1.0kΩ, f = 1.0kHz

- Notes:
- Short duration pulse test used to minimize self-heating effect.
 - The DC Current Gain, h_{FE}, (matched at I_C = 10mA and V_{CE} = 5V) Collector Emitter Saturation Voltage, V_{CE(SAT)}, and Base Emitter Saturation Voltage, V_{BE(SAT)} are matched with typical matched tolerances of 1% and maximum of 2%.

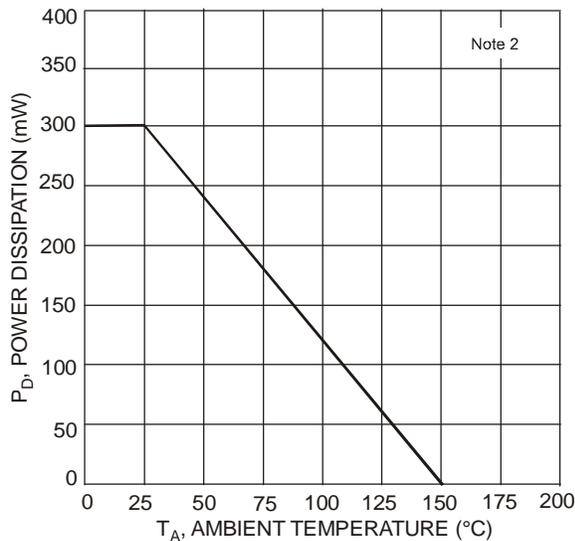


Fig. 1, Max Power Dissipation vs. Ambient Temperature

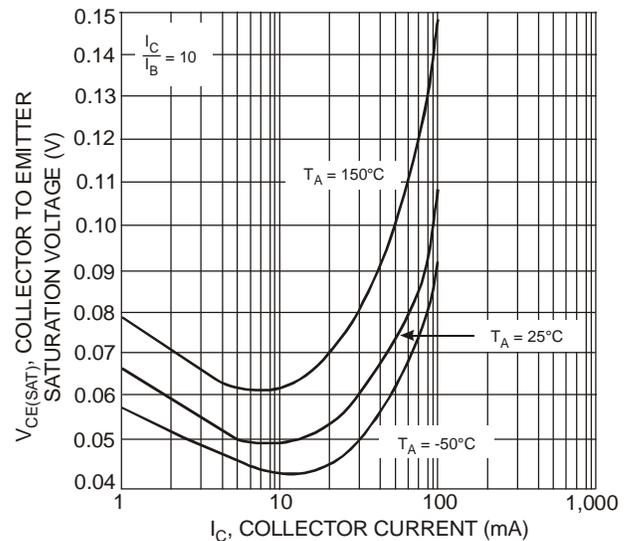


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

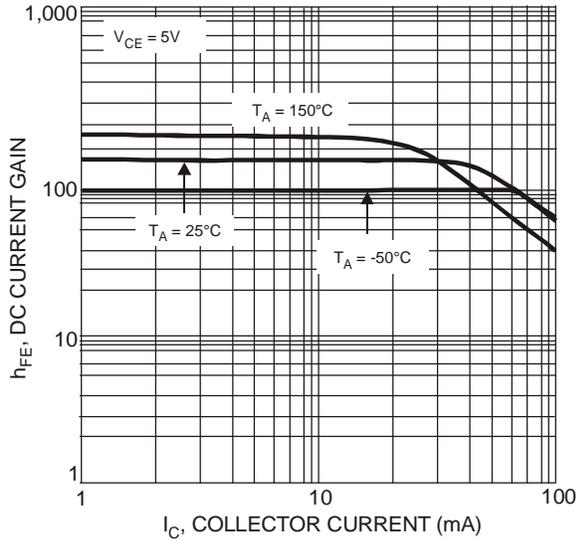


Fig. 3, DC Current Gain vs. Collector Current

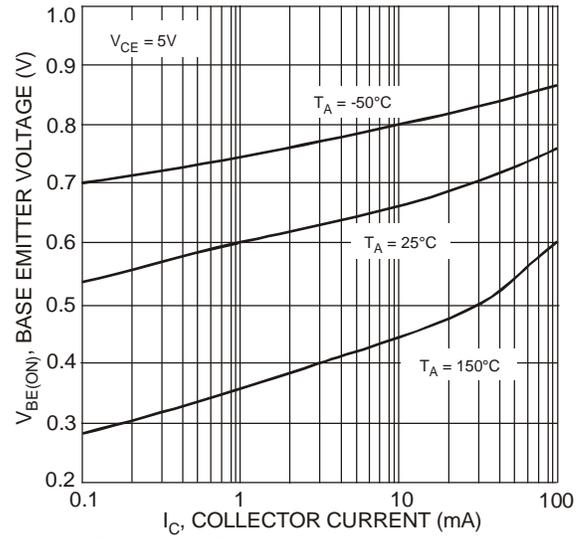


Fig. 4, Base Emitter Voltage vs. Collector Current

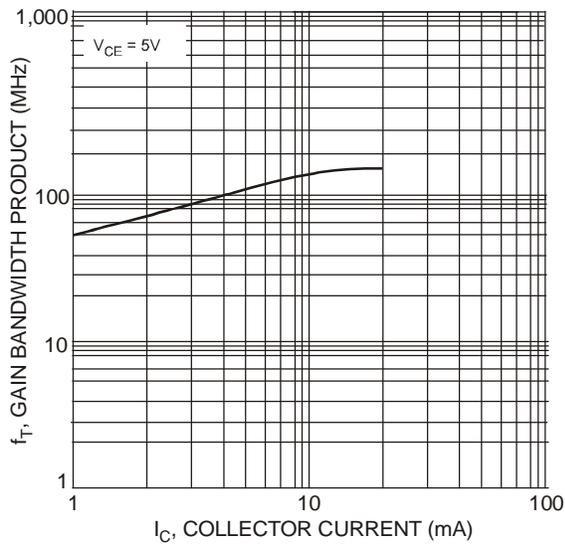


Fig. 5, Gain Bandwidth Product vs. Collector Current