



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



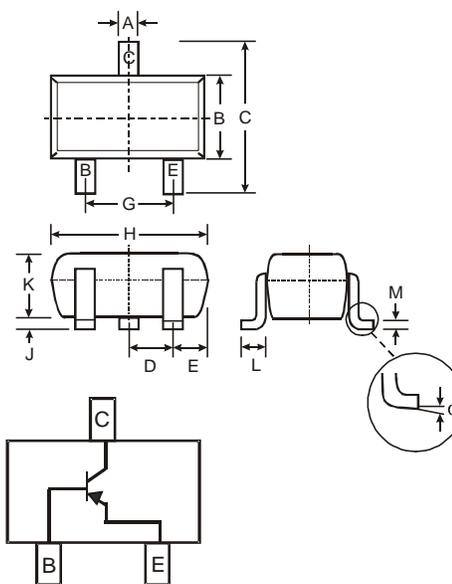
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Features

- Epitaxial Planar Die Construction
- Complementary NPN Type Available (NK-MMSTA05/NK-MMSTA06)
- Ideal for Low Power Amplification and Switching
- Ultra-Small Surface Mount Package

Mechanical Data

- Case: SOT-323
- Case Material: Molded Plastic, "Green" Molding Compound, Note 4. 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 Alloy 42 leadframe).
- NK-MMSTA55 Marking K2H, K2G (See Page 3)
- NK-MMSTA56 Marking K2G (See Page 3)
- Ordering & Date Code Information: See Page 3
- Weight: 0.006 grams (approximate)



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.18
α	0°	8°
All Dimensions in mm		

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

Characteristic	Symbol	NK-MMSTA55	NK-MMSTA56	Unit
Collector-Base Voltage	V_{CB0}	-60	-80	V
Collector-Emitter Voltage	V_{CEO}	-60	-80	V
Emitter-Base Voltage	V_{EBO}	-4.0		V
Collector Current - Continuous (Note 1)	I_C	-500		mA
Power Dissipation (Note 1)	P_d	200		mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	625		$^\circ\text{C}/\text{W}$
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 5)					
Collector-Base Breakdown Voltage	NK-MMSTA55 NK-MMSTA56 V _{(BR)CBO}	-60 -80	—	V	I _C = -100μA, I _E = 0
Collector-Emitter Breakdown Voltage	NK-MMSTA55 NK-MMSTA56 V _{(BR)CEO}	-60 -80	—	V	I _C = -1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-4.0	—	V	I _E = -100μA, I _C = 0
Collector Cutoff Current	NK-MMSTA55 NK-MMSTA56 I _{CBO}	—	-100	nA	V _{CB} = -60V, I _E = 0 V _{CB} = -80V, I _E = 0
Collector Cutoff Current	NK-MMSTA55 NK-MMSTA56 I _{CEX}	—	-100	nA	V _{CE} = -60V, I _{BO} = 0V V _{CE} = -80V, I _{BO} = 0V
ON CHARACTERISTICS (Note 5)					
DC Current Gain	h _{FE}	100	—	—	I _C = -10mA, V _{CE} = -1.0V I _C = -100mA, V _{CE} = -1.0V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	-0.25	V	I _C = -100mA, I _B = -10mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	—	-1.2	V	I _C = -100mA, V _{CE} = -1.0V
SMALL SIGNAL CHARACTERISTICS					
Current Gain-Bandwidth Product	f _T	50	—	MHz	V _{CE} = -1.0V, I _C = -100mA, f = 100MHz

Notes: 5. Short duration pulse test used to minimize self-heating effect.

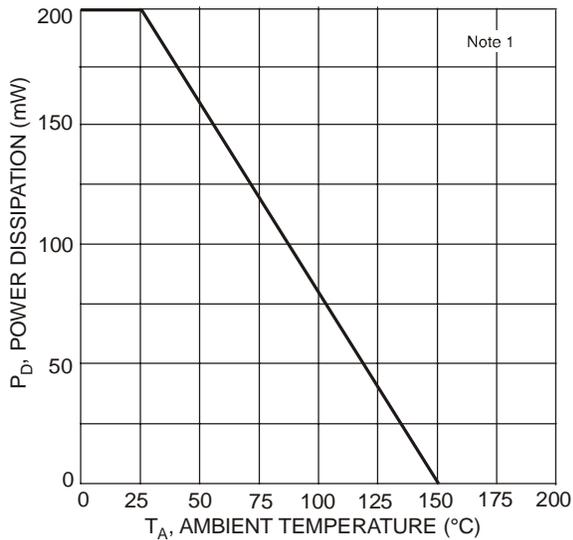


Fig. 1, Max Power Dissipation vs. Ambient Temperature

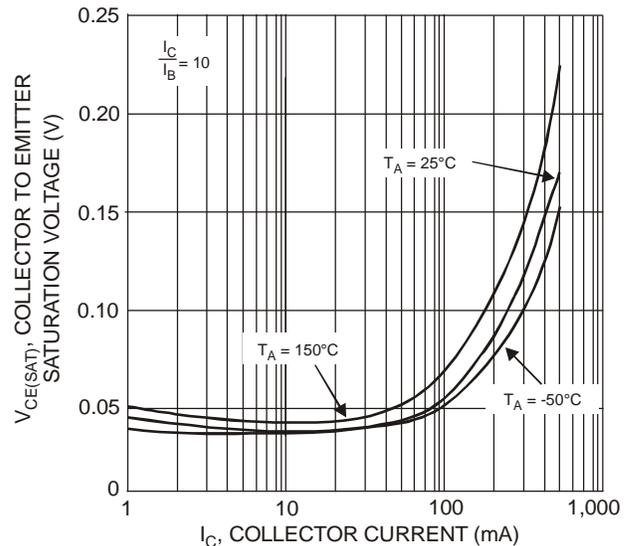


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

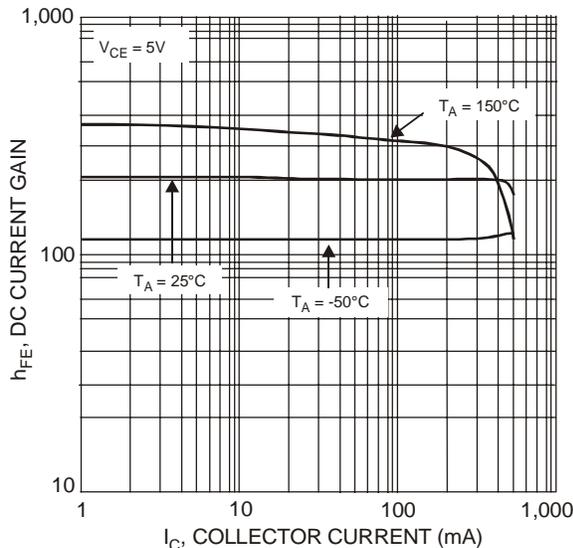


Fig. 3, DC Current Gain vs. Collector Current

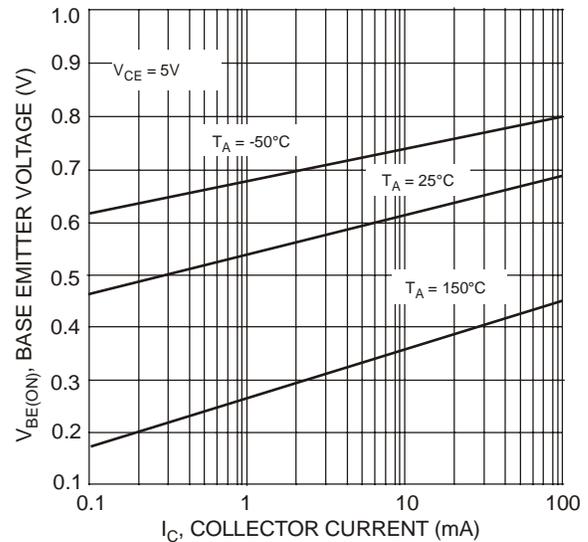


Fig. 4, Base Emitter Voltage vs. Collector Current

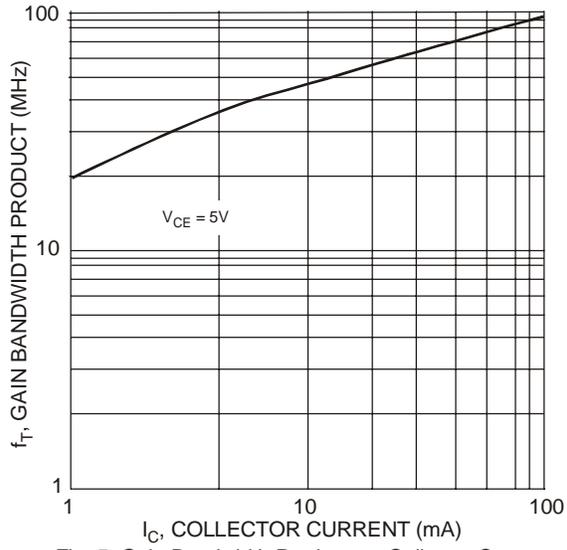


Fig. 5 Gain Bandwidth Product vs. Collector Current