优尚

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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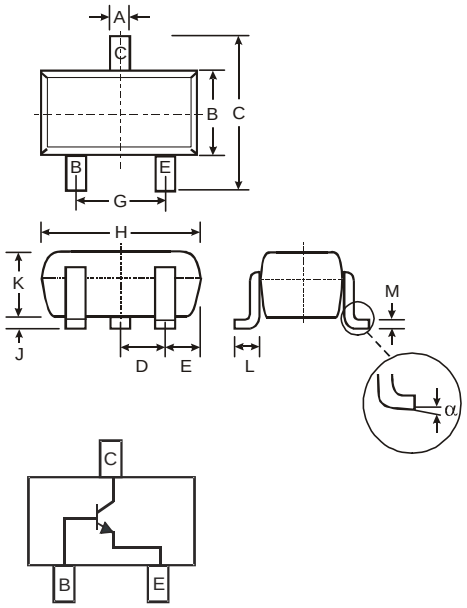
Features

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (NK-MMSTA55/NK-MMSTA56)
- Ideal for Medium 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-MMSTA05 Marking K1H, K1G (See Page 3)
- NK-MMSTA06 Marking K1G (See Page 3)
- Order & 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°C unless otherwise specified

Characteristic	Symbol	NK-MMSTA05	NK-MMSTA06	Unit
Collector-Base Voltage	V_{CBO}	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		°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150		°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	NK-MMSTA05 NK-MMSTA06	$V_{(BR)CBO}$	60 80	—	V	I_C = 100μA, I_E = 0
Collector-Emitter Breakdown Voltage	NK-MMSTA05 NK-MMSTA06	$V_{(BR)CEO}$	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-MMSTA05 NK-MMSTA06	I_{CBO}	—	100	nA	V_{CB} = 60V, I_E = 0 V_{CB} = 80V, I_E = 0
Collector Cutoff Current	NK-MMSTA05 NK-MMSTA06	I_{CES}	—	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	100	—	MHz	V_{CE} = 2.0V, I_C = 10mA, f = 100MHz

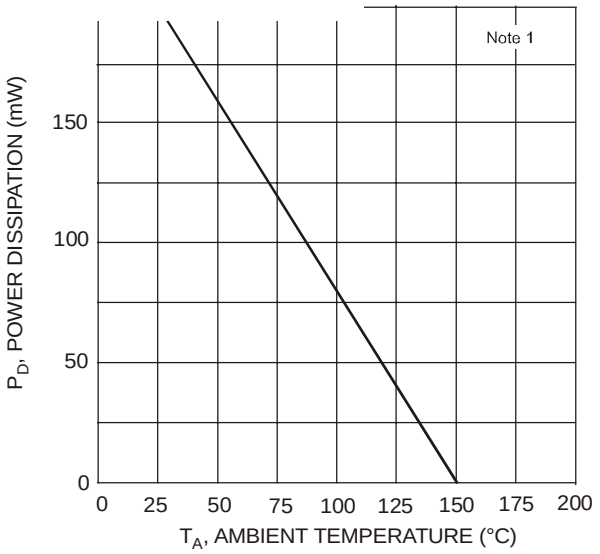


Fig. 1, Max Power Dissipation vs. Ambient Temperature

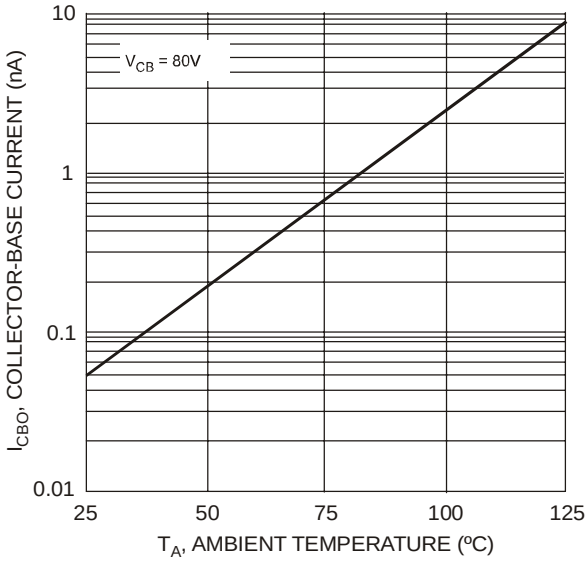


Fig. 2 Typical Collector-Cutoff Current vs. Ambient Temperature

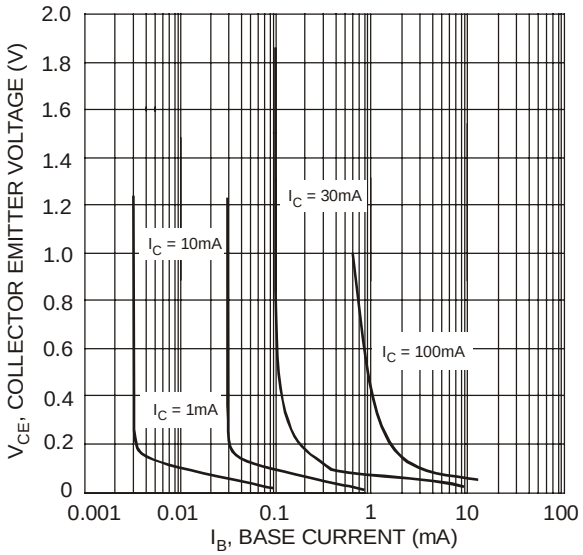


Fig. 3 Typical Collector Saturation Region

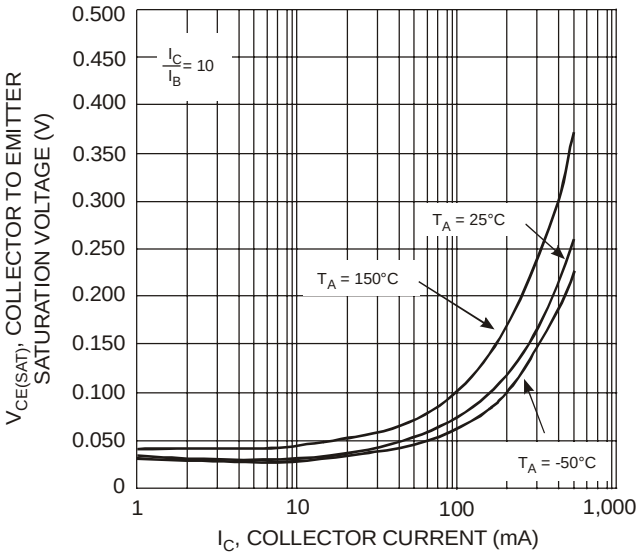


Fig. 4 Collector Emitter Saturation Voltage vs. Collector Current

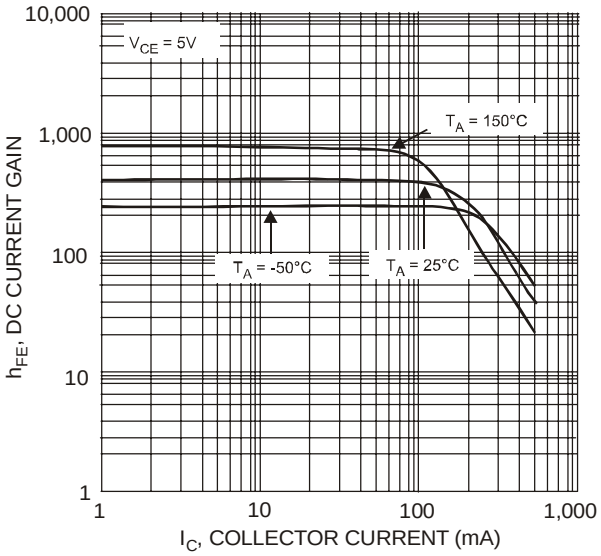


Fig. 5, DC Current Gain vs. Collector Current

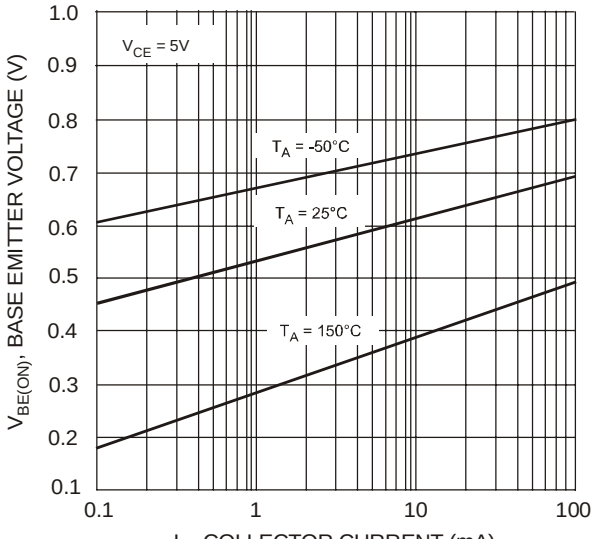


Fig. 6, Base Emitter Voltage vs. Collector Current

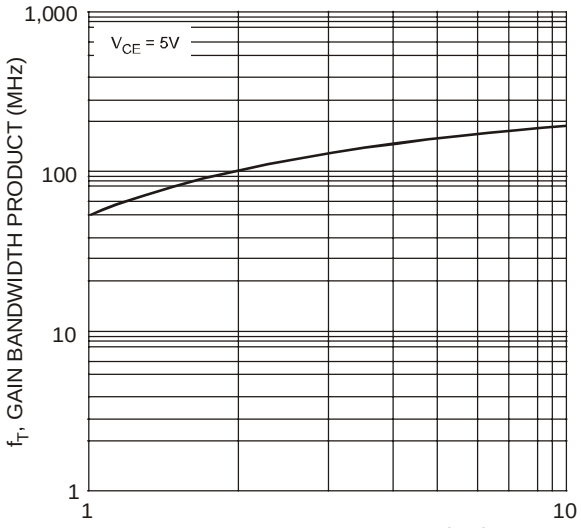


Fig. 7, Gain Bandwidth Product vs Collector Current