

isc Silicon NPN Power Transistors

KSD1406

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 60V(\text{Min})$
- Collector Current- $I_C = 3A(\text{Max.})$
- Low Collector Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

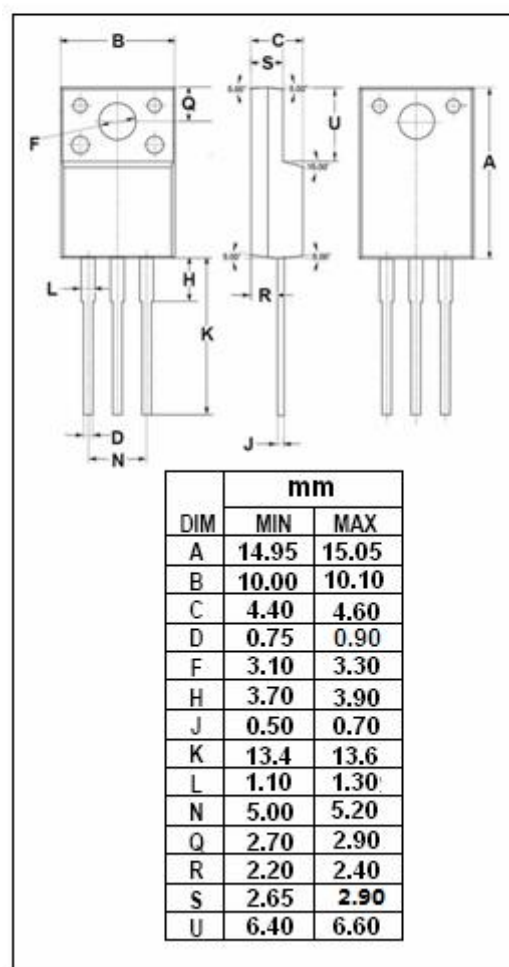
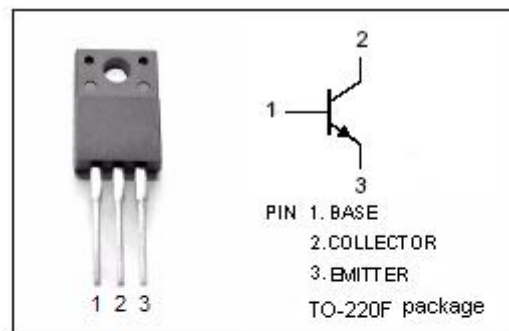
- Low frequency power amplifier

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_B	Base Current-Continuous	0.5	A
P_T	Total Power Dissipation @ $T_C = 25^\circ\text{C}$	25	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	60			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.3A			1.0	V
V _{BE(On)}	Base-Emitter On Voltage	I _C = 0.5A; V _{CE} = 5V			1.0	V
I _{CBO}	Collector Cutoff Current	At rated Voltage			10	μ A
I _{CEO}	Collector Cutoff Current	At rated Voltage			10	μ A
I _{EBO}	Emitter Cutoff Current	At rated Voltage			10	μ A
h _{FE-1}	DC Current Gain	I _C = 0.5A; V _{CE} = 5V	60		320	
h _{FE-2}	DC Current Gain	I _C = 3A; V _{CE} = 5V	20			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 5V		3		MHz

◆ h_{FE-1} Classifications

O	Y	G
60-120	100-200	150-300

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