

isc Silicon PNP Power Transistors

TIP42A

DESCRIPTION

- DC Current Gain $-h_{FE} = 30(\text{Min})@ I_C = -0.3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -60V(\text{Min})$
- Complement to Type TIP41A
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

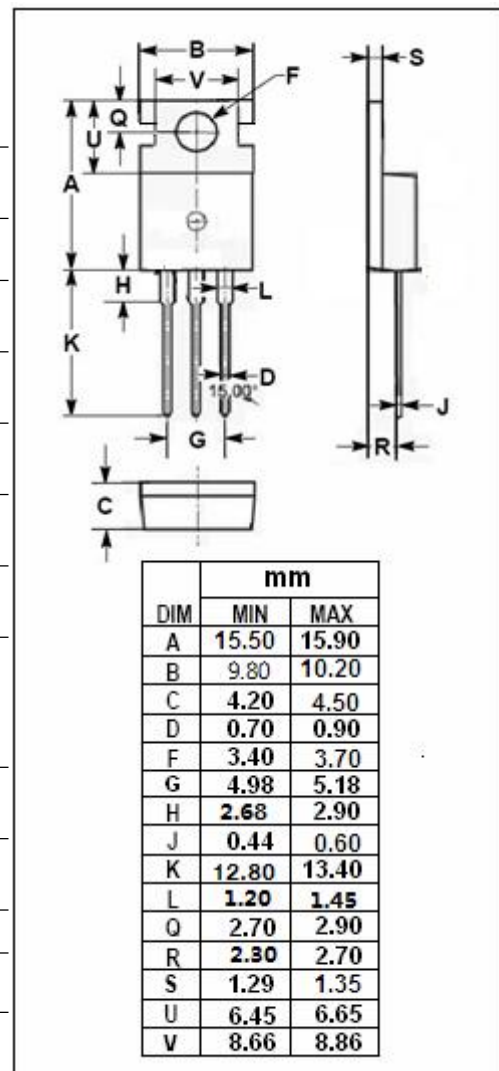
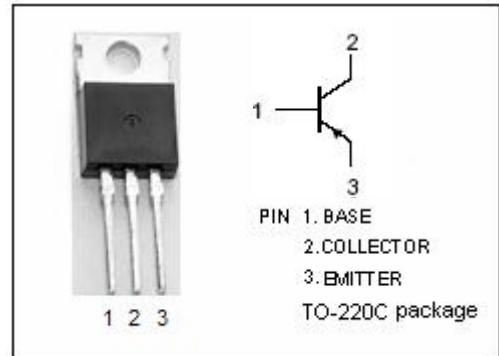
- Designed for use in general purpose amplifier and switching applications

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	-5	V
I_C	Collector Current-Continuous	-6	A
I_{CM}	Collector Current-Peak	-10	A
I_B	Base Current	-2	A
P_C	Collector Power Dissipation $T_C = 25^\circ\text{C}$	65	W
	Collector Power Dissipation $T_a = 25^\circ\text{C}$	2	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	57	$^\circ\text{C}/\text{W}$



isc Silicon PNP Power Transistors**TIP42A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA; I _B = 0	-60		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -6A; I _B = -0.6A		-1.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -6A; V _{CE} = -4V		-2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -60V; I _E = 0		-0.4	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -30V; I _B = 0		-0.7	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0		-1.0	mA
h _{FE-1}	DC Current Gain	I _C = -0.3A; V _{CE} = -4V	30		
h _{FE-2}	DC Current Gain	I _C = -3A; V _{CE} = -4V	15	75	
f _T	Current-Gain—Bandwidth Product	I _C = -0.5A; V _{CE} = -10V	3		MHz

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