

isc Silicon PNP Darlington Power Transistor

2N6042

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = -3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -100V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -2.0V(\text{Max}) @ I_C = -3A$
- Complement to Type 2N6045

APPLICATIONS

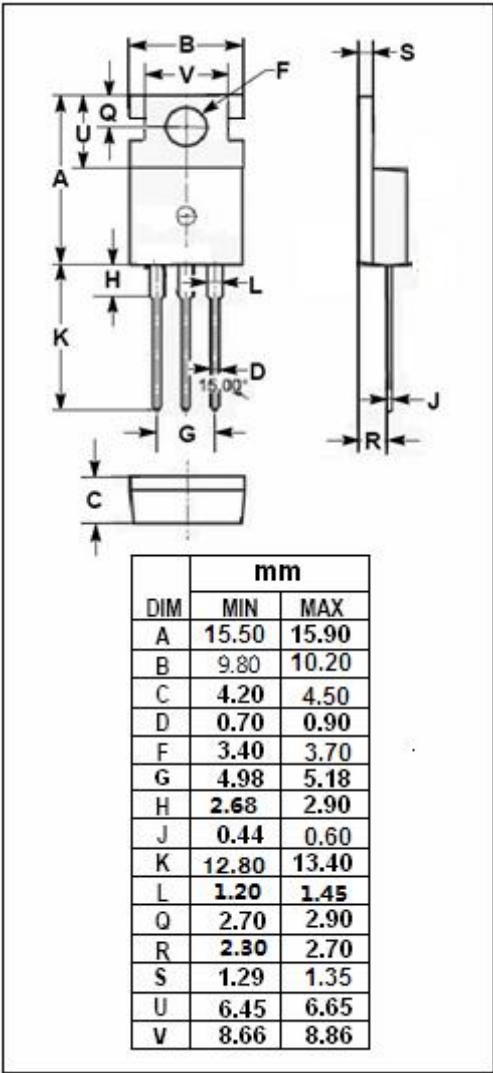
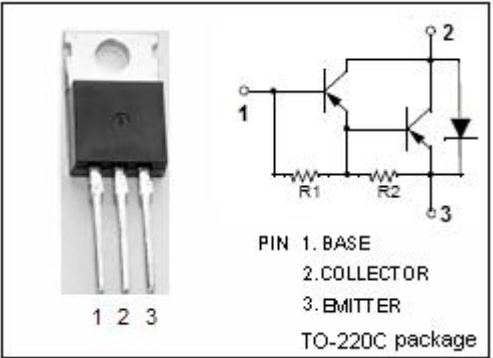
- Designed for general purpose amplifier and low speed switching applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-100	V
V _{CEO}	Collector-Emitter Voltage	-100	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current-Continuous	-8	A
I _{CM}	Collector Current-Peak	-16	A
I _B	Base Current-DC	-120	mA
P _C	Collector Power Dissipation T _C =25°C	75	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.67	°C/W



isc Silicon PNP Darlington Power Transistor**2N6042****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA, I _B = 0	-100			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -3A, I _B = -12mA			-2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation voltage	I _C = -8A, I _B = -80mA			-4.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -8A, I _B = -80mA			-4.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -4A; V _{CE} = -4V			-2.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -100V; I _E = 0			-0.5	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -50V; I _B = 0			-0.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2.0	mA
h _{FE-1}	DC Current Gain	I _C = -3A; V _{CE} = -4V	1000		20000	
h _{FE-2}	DC Current Gain	I _C = -8A; V _{CE} = -4V	100			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = -10V, f = 0.1MHz			300	pF