

isc Silicon PNP Darlington Power Transistor

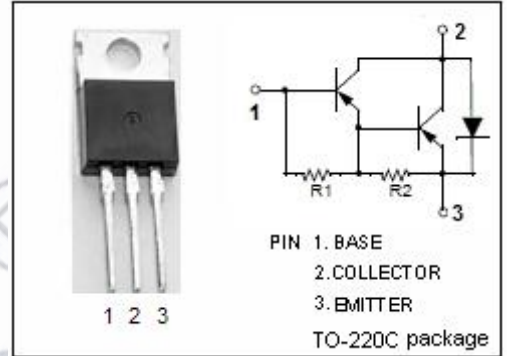
2N6040

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min})@ I_C = -4\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -60\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -2.0\text{V}(\text{Max})@ I_C = -4\text{A}$
- Complement to Type 2N6043

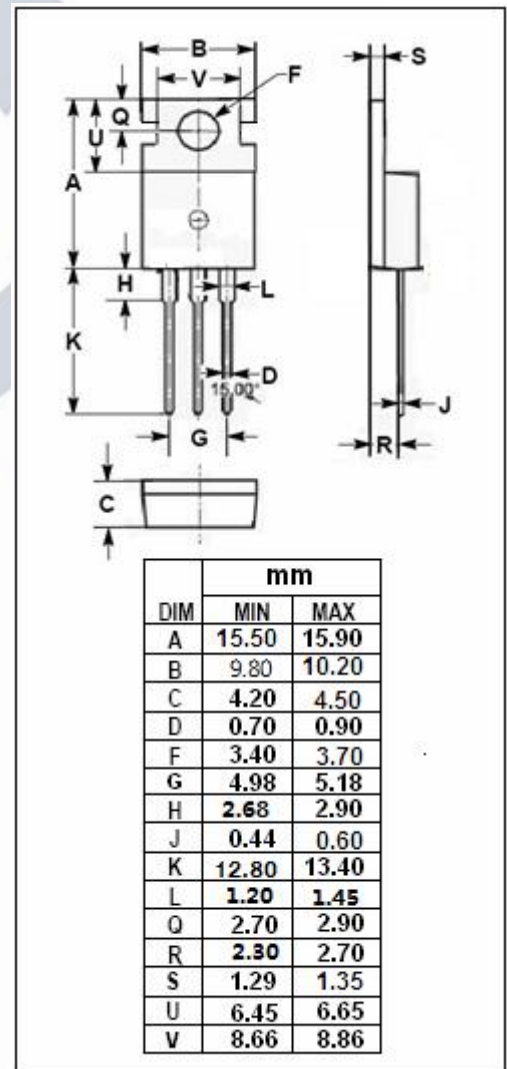
APPLICATIONS

- 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	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	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 $T_C = 25^\circ\text{C}$	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

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ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}, I_B = 0$	-60			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -4\text{A}, I_B = -16\text{mA}$			-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation voltage	$I_C = -8\text{A}, I_B = -80\text{mA}$			-4.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -8\text{A}, I_B = -80\text{mA}$			-4.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -4\text{A}; V_{CE} = -4\text{V}$			-2.8	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -60\text{V}, I_E = 0$			-0.5	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -30\text{V}, I_B = 0$			-0.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-2.0	mA
h_{FE-1}	DC Current Gain	$I_C = -4\text{A}; V_{CE} = -4\text{V}$	1000		20000	
h_{FE-2}	DC Current Gain	$I_C = -8\text{A}; V_{CE} = -4\text{V}$	100			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}, f = 0.1\text{MHz}$			300	pF