

isc Silicon NPN Power Transistor

2SD878

DESCRIPTION

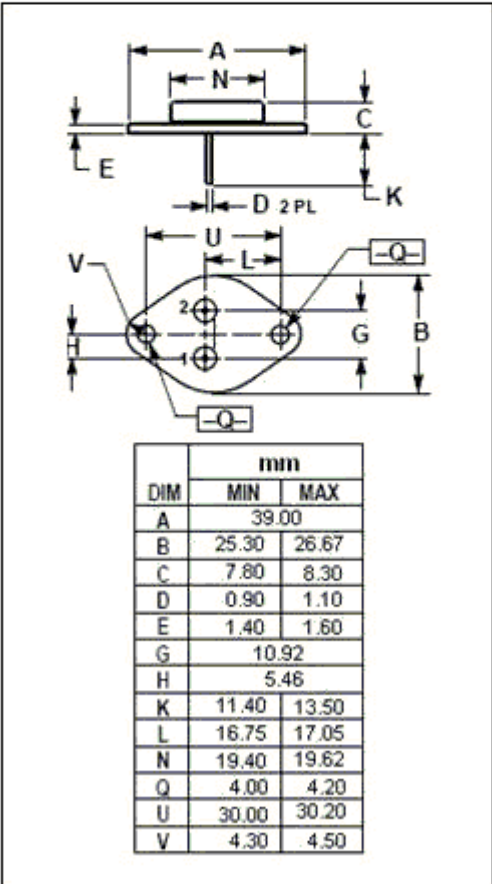
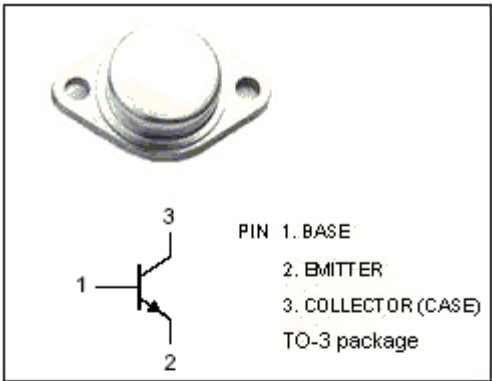
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V$ (Min)
- High Power Dissipation
- High Current Capability

APPLICATIONS

- High power amplifier applications.
- High power switching applications.
- DC-DC converter applications.
- Regulator applications.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_B	Base Current-Continuous	7	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	115	W
T_j	Junction Temperature	175	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65~175	$^{\circ}C$



isc Silicon NPN Power Transistor**2SD878****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA; I _B = 0	60			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.4A			1.1	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 4A; V _{CE} = 4V			1.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 100V; I _E = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			0.1	mA
h _{FE-1}	DC Current Gain	I _C = 4A; V _{CE} = 4V	20		70	
h _{FE-2}	DC Current Gain	I _C = 10A; V _{CE} = 4V	5			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		150		pF
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 4V		1.5		MHz

Switching Times

t _{on}	Turn-on Time	V _{CC} = 50V, R _L = 10 Ω, I _{B1} = -I _{B2} = 0.5A		2.5		μ s
t _{stg}	Storage Time			3.5		
t _f	Fall Time			1.2		