

isc Silicon NPN Darlington Power Transistor

2SD2399

DESCRIPTION

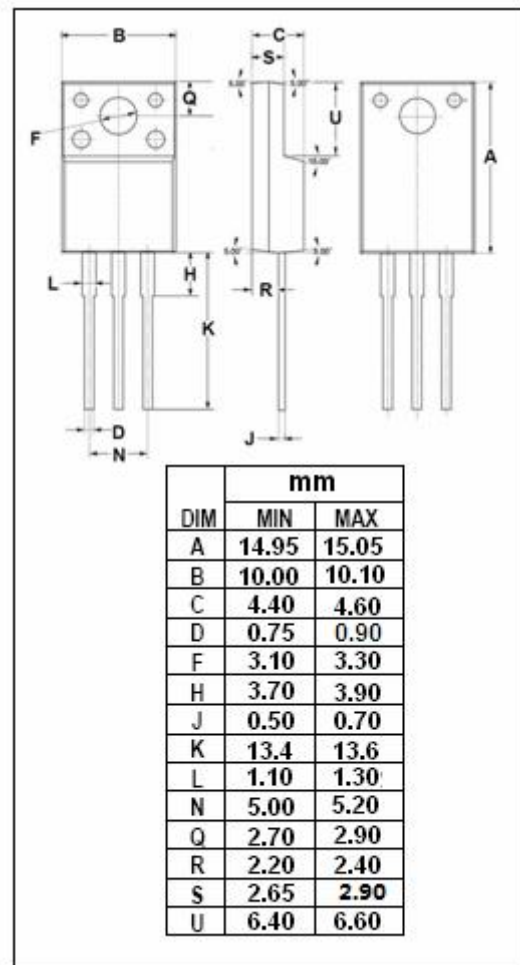
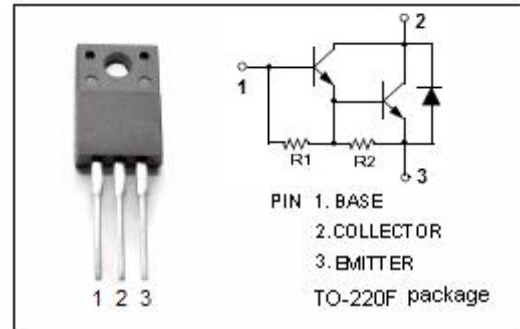
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 2A$
- High DC Current Gain
: $h_{FE} = 1000(\text{Min}) @ I_C = 2A, V_{CE} = 3V$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	6	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	30	W
	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	2.0	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD2399****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 = 10mA; I _B = 0	80			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 50 μA; I _E = 0	80			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 4mA			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 80V; I _E = 0			100	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			3.0	mA
h _{FE}	DC Current Gain	I _C = 2A; V _{CE} = 3V	1000		10000	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1MHz		35		pF
f _T	Current-Gain—Bandwidth Product	I _E = -0.2A; V _{CE} = 5V, f= 10MHz		40		MHz

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