

isc Silicon NPN Darlington Power Transistor

MJD122

DESCRIPTION

- High DC current gain
- Built-in a damper diode at E-C
- Monolithic Construction With Built-in Base-Emitter Shunt Resistors
- Complementary Pairs Simplifies Designs
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

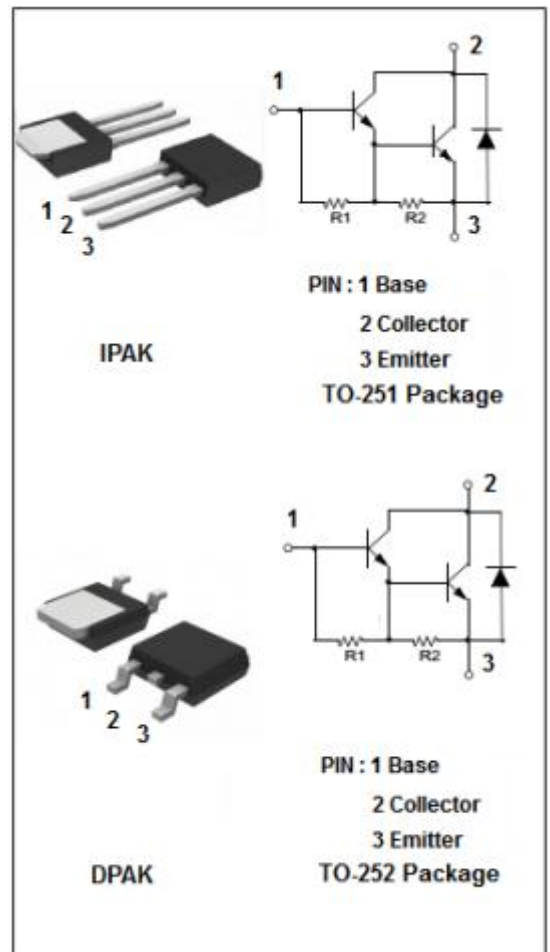
- Designed for general purpose amplifier and low speed switching applications.

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

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	5	A
I_{Cm}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	120	mA
P_C	Collector Power Dissipation $T_a=25^\circ\text{C}$	20	W
	Collector Power Dissipation $T_c=25^\circ\text{C}$	0.16	
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	6.25	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

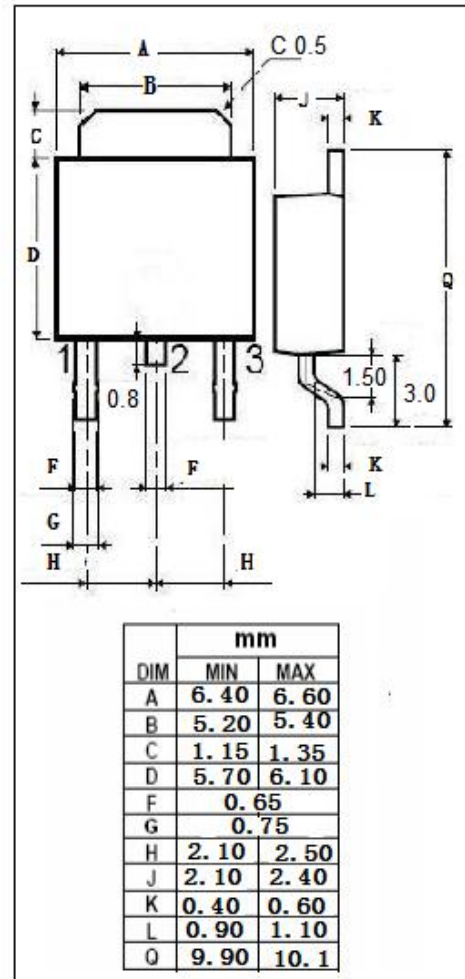
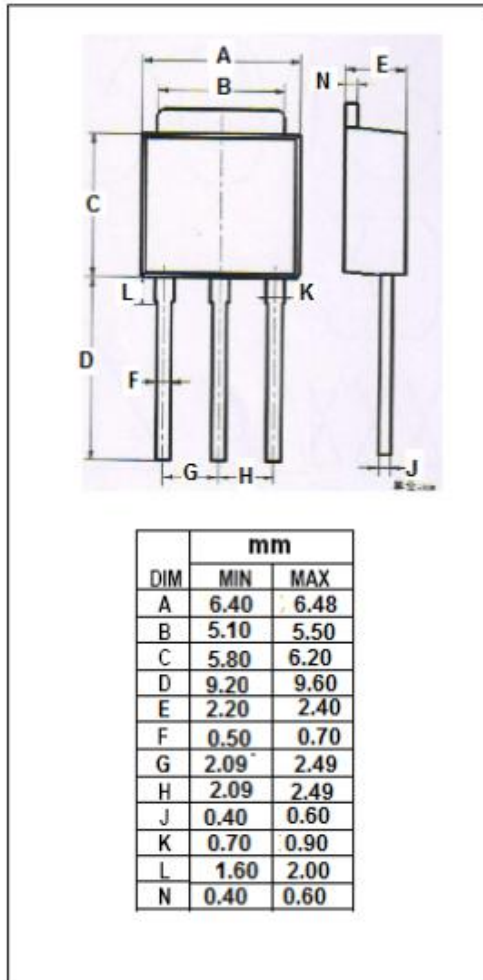
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(sus)}	Collector-Emitter Sustaining Voltage	I _C = 30mA; I _B = 0	100			V
I _{CEO}	Collector Cutoff Current	V _{CE} = 50V; I _C = 0			10	μA
I _{CBO}	Collector Cutoff Current	V _{CB} =100V; I _E = 0			10	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			2	mA
h _{FE-1*}	DC Current Gain	I _C = 4A; V _{CE} =4V	1000		1200 0	
h _{FE-2*}	DC Current Gain	I _C = 8A; V _{CE} = 4V	100			
V _{CE(sat)-1*}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 16mA			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
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 0.1MHz		200		pF

*:Pulse test PW≤300us,duty cycle≤2%

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Outline Drawing



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