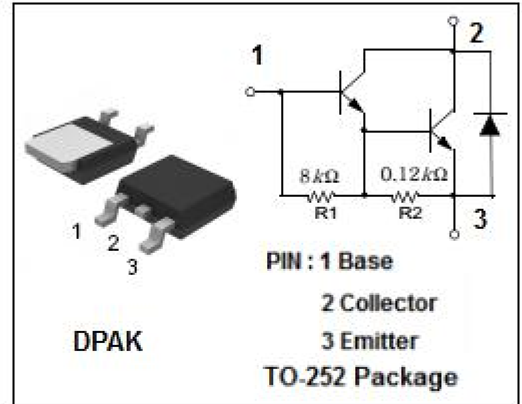
isc Silicon NPN Darlington Power Transistor MJD122



DESCRIPTION

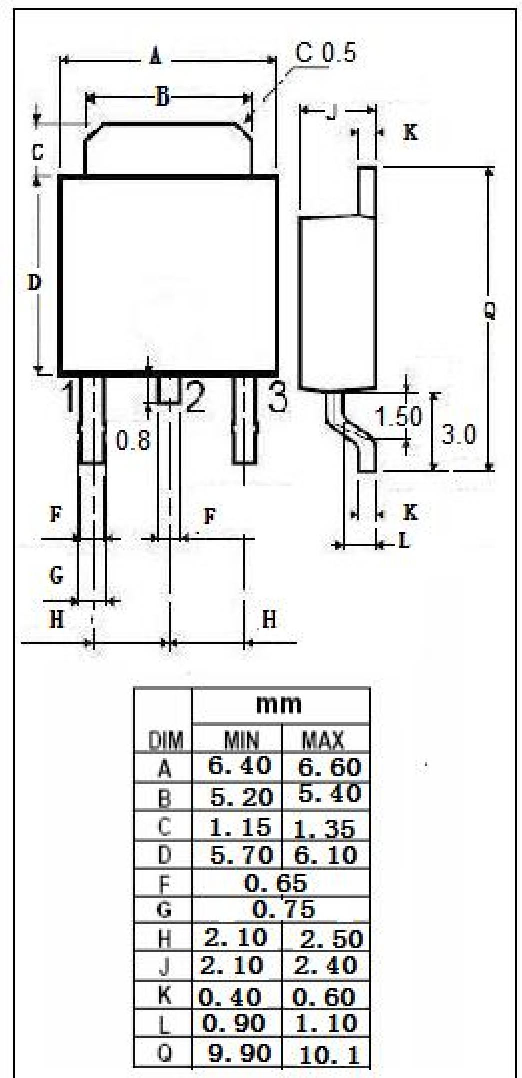
- Low Collector-Emitter saturation voltage
- Lead formed for surface mount applications
- High DC current gain
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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
P_C	Total Power Dissipation @ Ta=25℃	1.75	W
P_C	Collector Power Dissipation T_C=25℃	20	W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	71.4	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	6. 40	6. 60
B	5. 20	5. 40
C	1. 15	1. 35
D	5. 70	6. 10
F	0. 65	
G	0. 75	
H	2. 10	2. 50
J	2. 10	2. 40
K	0. 40	0. 60
L	0. 90	1. 10
Q	9. 90	10. 1

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA; I_B= 0	100			V
$V_{CE(sat)-1}$	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 voltage	I_C= 4A; V_{CE}= 4V			2.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}=50V; I_E= 0			10	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}=5V; I_C= 0			2	mA
h_{FE1}	DC Current Gain	I_C= 4A; V_{CE}= 4V	1000		12000	
h_{FE2}	DC Current Gain	I_C=8A; V_{CE}= 4V	100			
f_T	Current-Gain—Bandwidth Product	I_C=3A; V_{CE}= 4V	4			MHz
C_{OB}	Output Capacitance	I_E=0; V_{CB}= 10V; f= 1.0MHz		200		pF