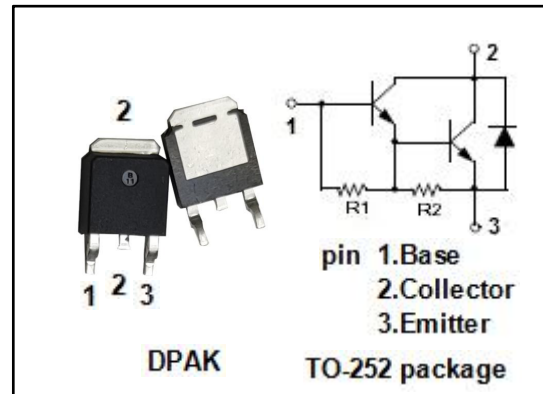


**isc Silicon NPN Darlington Power Transistor**
**MJD112**
**DESCRIPTION**

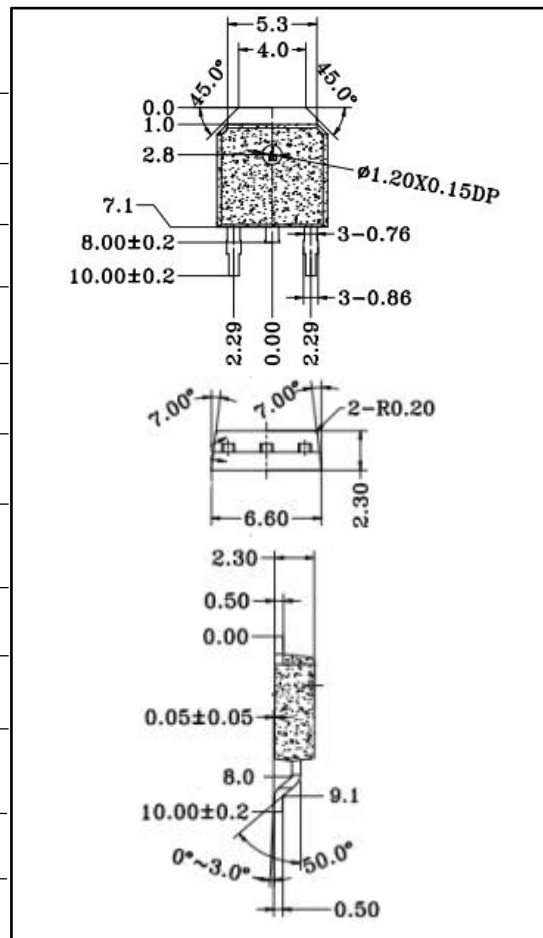
- High DC current gain
- Lead formed for surface mount applications
- Built-in a damper diode at E-C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

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


**ABSOLUTE MAXIMUM RATINGS(T<sub>C</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	100	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current-Continuous	2	A
I <sub>CP</sub>	Collector Current-Pulse	4	A
I <sub>B</sub>	Base Current-Continuous	50	mA
P <sub>C</sub>	Collector Power Dissipation T <sub>C</sub> =25°C	20	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C


**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	6.25	°C/W

**isc Silicon NPN Darlington Power Transistor**
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**ELECTRICAL CHARACTERISTICS**
**T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE(sat)-1</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2A; I <sub>B</sub> = 8mA		2.0	V
V <sub>CE(sat)-2</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 40mA		3.0	V
V <sub>BE(sat)</sub> *	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 40mA		4.0	V
V <sub>BE(on)</sub> *	Base-Emitter On Voltage	I <sub>C</sub> = 2A; V <sub>CE</sub> = 3V		2.8	V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 30mA; I <sub>B</sub> = 0	100		V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 80V; I <sub>E</sub> = 0		10	uA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0		2	mA
h <sub>FE-1</sub> *	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 3V	500		
h <sub>FE-2</sub> *	DC Current Gain	I <sub>C</sub> = 2A; V <sub>CE</sub> = 3V	1K	12K	
h <sub>FE-3</sub> *	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> =3V	200		

\*:Pulse test PW≤300us,duty cycle≤2%

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