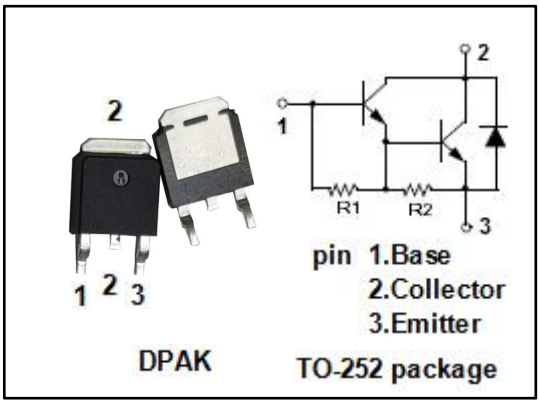
isc Silicon NPN Darlington Power Transistor MJD112

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

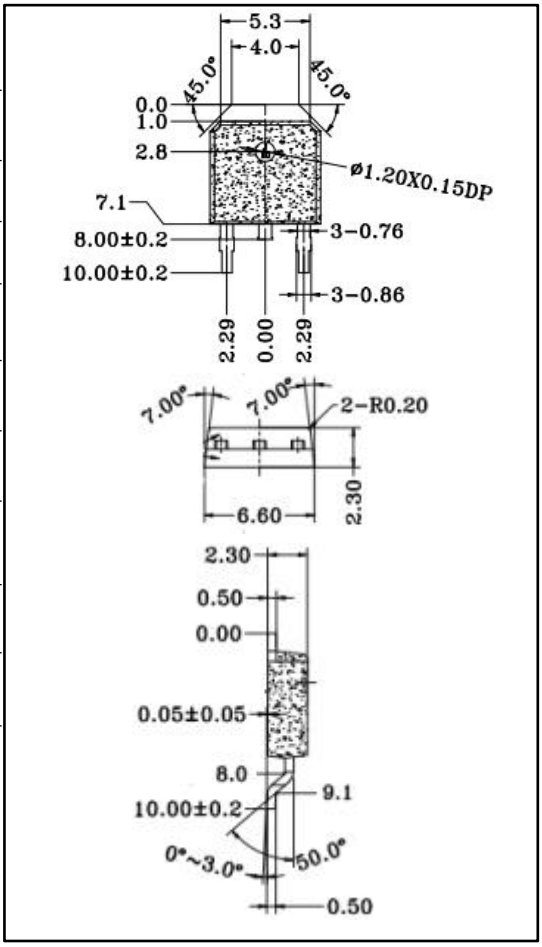


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_C=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	2	A
I_{CP}	Collector Current-Pulse	4	A
I_B	Base Current-Continuous	50	mA
P_C	Collector Power Dissipation T_C=25℃	20	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	6.25	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(sat)-1}$*	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 8mA		2.0	V
$V_{CE(sat)-2}$*	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 40mA		3.0	V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 40mA		4.0	V
$V_{BE(on)}$*	Base-Emitter On Voltage	I_C= 2A; V_{CE}= 3V		2.8	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA; I_B= 0	100		V
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V; I_E= 0		10	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0		2	mA
h_{FE-1}*	DC Current Gain	I_C= 0.5A; V_{CE}= 3V	500		
h_{FE-2}*	DC Current Gain	I_C= 2A; V_{CE}= 3V	1K	12K	
h_{FE-3}*	DC Current Gain	I_C= 4A; V_{CE}=3V	200		

*:Pulse test PW≤300us,duty cycle≤2%