

isc Silicon PNP Power Transistor

MJD5731

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -350V(\text{Min})$
- High Switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for line operated audio output amplifier SWITCHMODE power supply drivers and other switching applications.

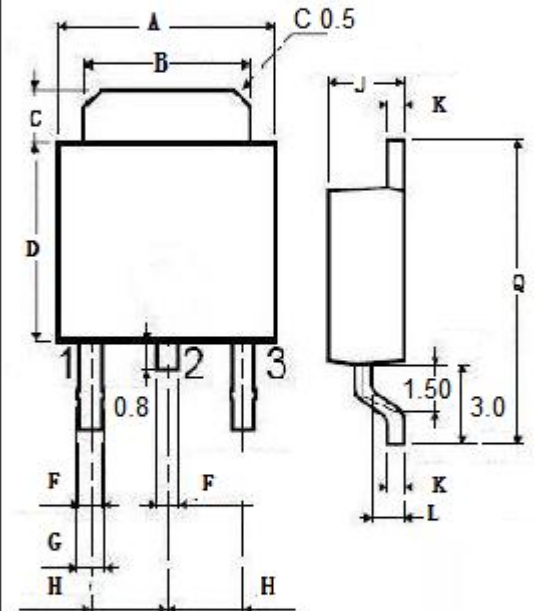
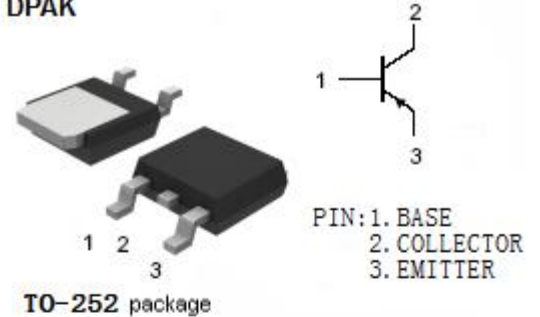
ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEO}	Collector-Emitter Voltage	-350	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-1.0	A
I_{CM}	Collector Current-Peak	-3.0	A
P_C	Total Power Dissipation @ $T_C=25^\circ\text{C}$	15	W
	Collector Power Dissipation $T_a=25^\circ\text{C}$	1.56	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	8.33	$^\circ\text{C/W}$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	80	$^\circ\text{C/W}$

DPAK



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
E	0.65	0.75
F	2.10	2.50
G	2.10	2.40
H	0.40	0.60
I	0.90	1.10
J	9.90	10.1

isc Silicon PNP Power Transistor

MJD5731

ELECTRICAL CHARACTERISTICS

 $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=-30\text{mA}$, $I_B=0$	-350			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=-1\text{A}$; $I_B=-0.2\text{A}$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=-1\text{A}$; $V_{CE}=-10\text{V}$			-1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=-250\text{V}$; $I_E=0$			-0.1	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=-350\text{V}$; $I_E=0$			-10	uA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=-5\text{V}$; $I_C=0$			-0.5	mA
h_{FE}	DC Current Gain	$I_C=-0.3\text{A}$; $V_{CE}=-10\text{V}$	30		175	
		$I_C=-1\text{A}$; $V_{CE}=-10\text{V}$	10			
f_T	Current-Gain—Bandwidth Product	$I_C=-0.2\text{A}$; $V_{CE}=-10\text{V}$	10			MHZ

Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

Notice:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment

which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.