

isc Silicon PNP Power Transistor**2SA1012-D****DESCRIPTION**

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4(V)(Max) @ I_C = -3A$
- High Switching Speed
- “-D” = TO-252 Package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

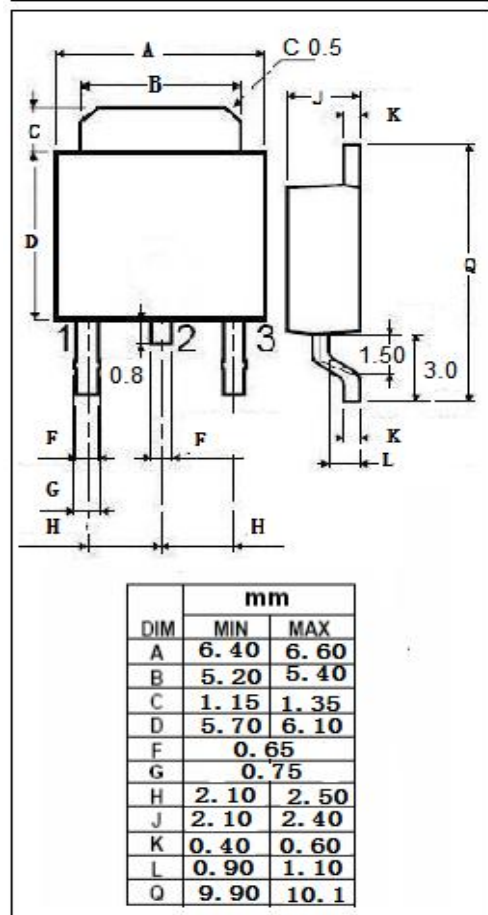
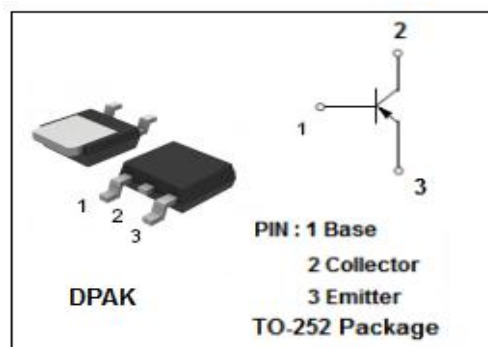
- Designed for high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-5	A
P_C	Total Power Dissipation @ $T_c=25^{\circ}C$	20	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10mA ; I_B = 0$	-50			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3A ; I_B = -0.15A$			-0.4	V



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$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -3A; I_B = -0.15A$			-1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -50V; I_E = 0$			-1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$			-1	μA
h_{FE-1}	DC Current Gain	$I_C = -1A; V_{CE} = -1V$	70		240	
h_{FE-2}	DC Current Gain	$I_C = -3A; V_{CE} = -1V$	30			
f_T	Current-Gain—Bandwidth Product	$I_C = -1A; V_{CE} = -4V$		60		MHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10V; f_{test} = 1MHz$		170		pF

Switching Times

t_{on}	Turn-on Time	$I_C = -3A, R_L = 10\Omega, I_{B1} = -I_{B2} = -0.15A, V_{CC} = -30V$		0.1		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			0.1		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240

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