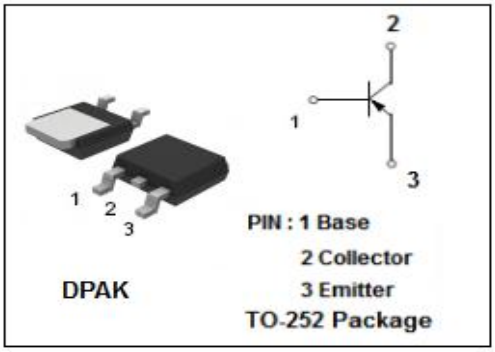
isc Silicon PNP Power Transistor — 2SA1012-D

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

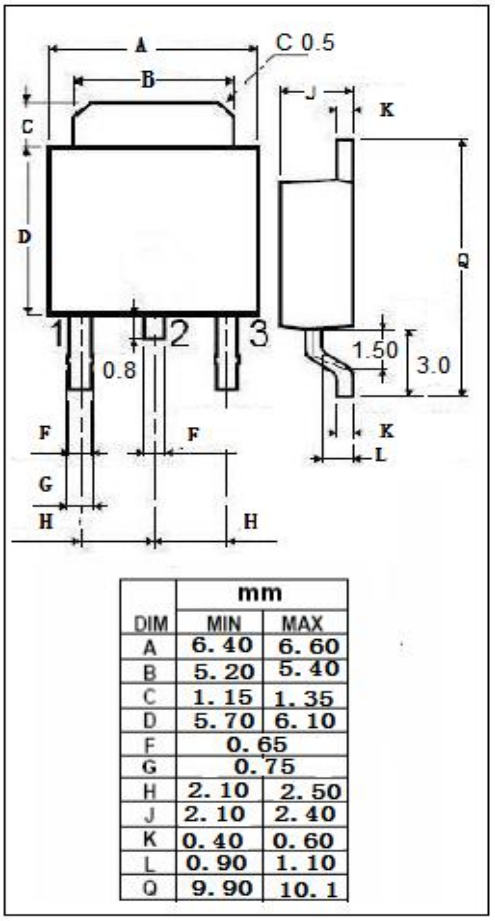


APPLICATIONS

- Designed for high current switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	20	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	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

ELECTRICAL CHARACTERISTICS

T_C=25℃ 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= 10Ω , 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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