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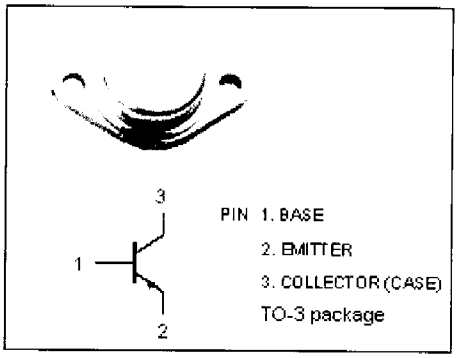
Silicon PNP Power Transistor — 2SA1041

DESCRIPTION

·High Current Capability
·Good Linearity of h_{FE}
·Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}$= -120V(Min.)
·Complement to Type 2SC2431

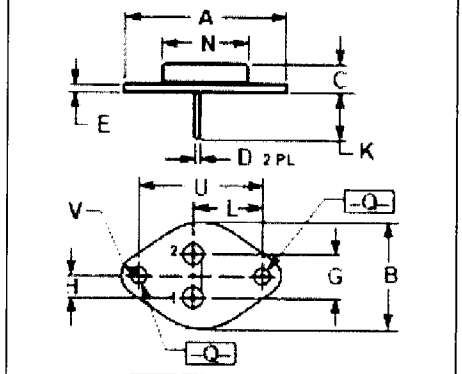


APPLICATIONS

·Designed for high speed, high voltage switching systems.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-15	A
I_B	Base Current-Continuous	-5	A
P_C	Collector Power Dissipation @T_C=25℃	100	W
T_j	Junction Temperature	175	℃
T_{stg}	Storage Temperature	-65~175	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
Q	10.92	
H	5.46	
K	11.80	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -10mA; R_{BE}= ∞	-120			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= -50 μA; I_E= 0	-120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= -1mA; I_C= 0	-5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -7A; I_B= -0.7A			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -7A; I_B= -0.7A			-1.8	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -120V; I_E= 0			-50	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= -120V; I_B= 0			-1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -4V; I_C= 0			-50	μA
h_{FE-1}	DC Current Gain	I_C= -1.5A; V_{CE}= -5V	35		200	
h_{FE-2}	DC Current Gain	I_C= -15A; V_{CE}= -5V	7			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= -10V; f= 1.0MHz		350		pF
f_T	Current-Gain—Bandwidth Product	I_C= -1A; V_{CE}= -10V		60		MHz

Switching Times

t_r	Rise Time	I_C= -7.5A; I_{B1}= -I_{B2}= -0.75A; R_L= 4Ω			0.8	μs
t_{stg}	Storage Time				1.0	μs
t_f	Fall Time				0.8	μs