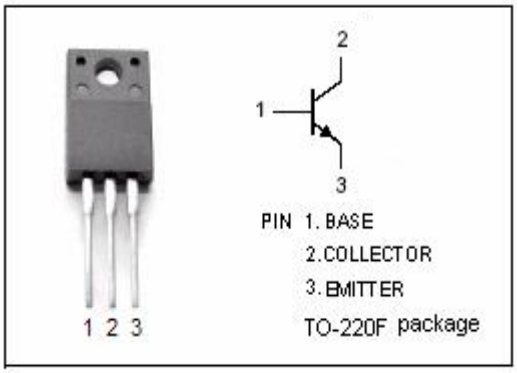
isc Silicon NPN Power Transistors — 2SD476N



DESCRIPTION

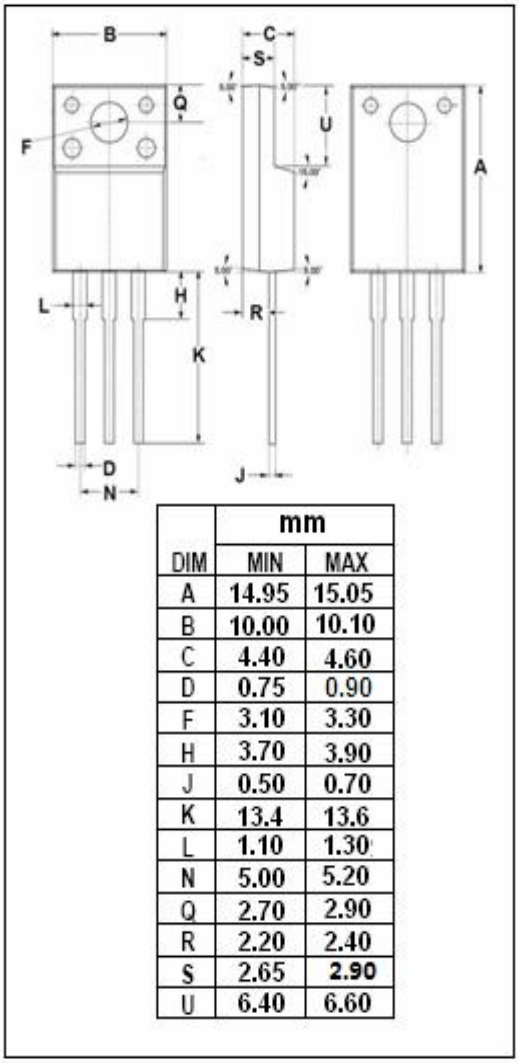
- Low Collector Saturation Voltage
  : $V_{CE(sat)}$= 1.0V(Max)@ I_C=2A
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 50V (Min)
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	8	A
P_C	Collector Power Dissipation @ T_C=25℃	40	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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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 ; R_{BE}= ∞	50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 10 μA; I_E= 0	70			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 10 μA; I_C= 0	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 50V; I_E= 0			1.0	μA
$h_{FE\ -1}$	DC current gain	I_C= 1A ; V_{CE}= 4V	200		300	
$h_{FE\ -2}$	DC current gain	I_C=0.1A ; V_{CE}= 4V	35			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 4V		7		MHz
Switching times						
t_{on}	Turn-on Time	I_C= 0.5A ;I_{B1}= I_{B2}= 50mA; V_{CC}= 10.5V		0.3		μs
t_{off}	Turn-off Time			3.0		μs
t_{stg}	Fall Time			2.5		μs

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