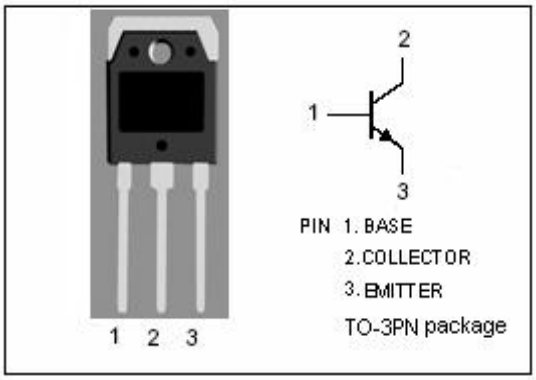
isc Silicon NPN Power Transistors — 2SC3519/A

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  $V_{(BR)CEO}$= 160V(Min)-2SC3519
  = 180V(Min)-2SC3519A
- Good Linearity of h_{FE}
- Complement to Type 2SA1386/A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

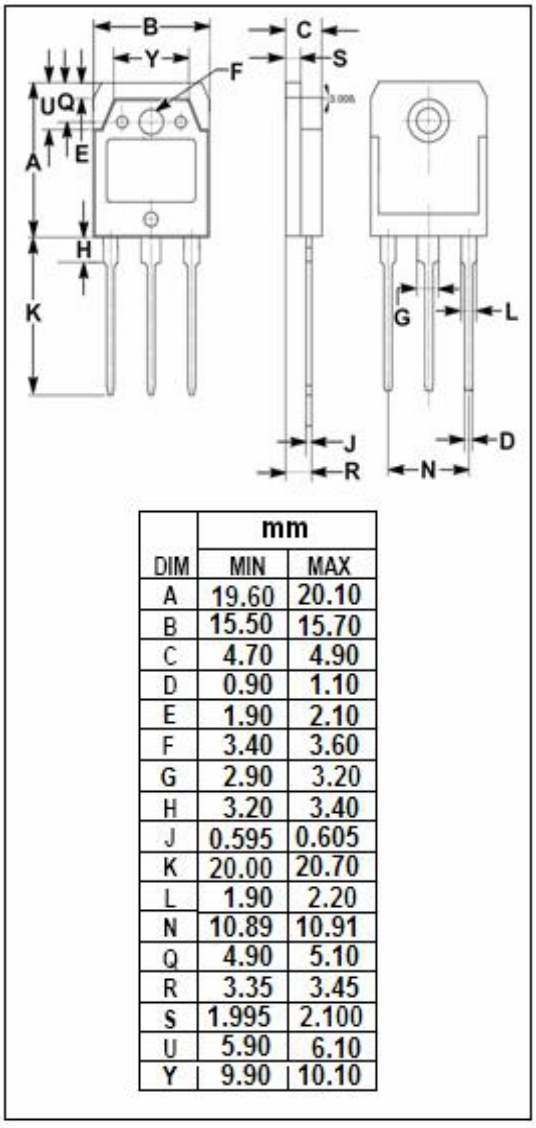


APPLICATIONS

- Designed for audio and general purpose applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	2SC3519	160	V
		2SC3519A	180	
V_{CEO}	Collector-Emitter Voltage	2SC3519	160	V
		2SC3519A	180	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		15	A
I_B	Base Current-Continuous		4	A
P_C	Collector Power Dissipation @ T_C=25℃		130	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-55~150	℃



DIM	mm MIN	MAX
A	19.60	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.10
Y	9.90	10.10

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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	2SC3519	I_C= 25mA ; I_B= 0	160			V
		2SC3519A		180			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= 5.0A; I_B= 0.5A			2.0	V
I_{CBO}	Collector Cutoff Current	2SC3519	V_{CB}= 160V; I_E= 0			100	μA
		2SC3519A	V_{CB}= 180V; I_E= 0			100	
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0			100	μA
h_{FE}	DC Current Gain		I_C= 5A ; V_{CE}= 4V	50		180	
C_{OB}	Output Capacitance		I_E= 0; V_{CB}= 10V;f_{test}= 1.0MHz		250		pF
f_T	Current-Gain—Bandwidth Product		I_E= -2A ; V_{CE}= 12V		50		MHz
Switching Times							
t_{on}	Turn-on Time		I_C= 10A ,R_L= 4Ω , I_{B1}= -I_{B2}= 1A,V_{CC}≒ 40V		0.2		μs
t_{stg}	Storage Time				1.3		μs
t_f	Fall Time				0.45		μs

◆ **h_{FE} Classifications**

O	P	Y
50-100	70-140	90-180