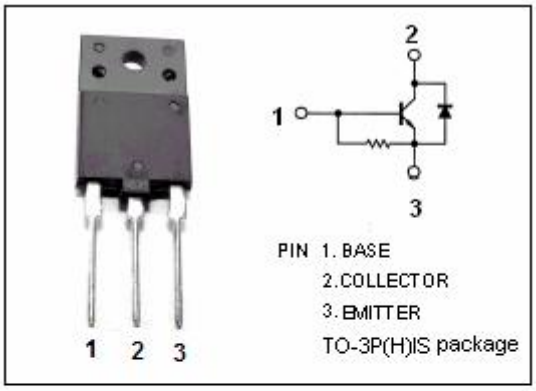
isc Silicon NPN Power Transistor — 2SD2089

DESCRIPTION

- High Breakdown Voltage-
  : V_{CBO}= 1500V (Min)
- High Switching Speed
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

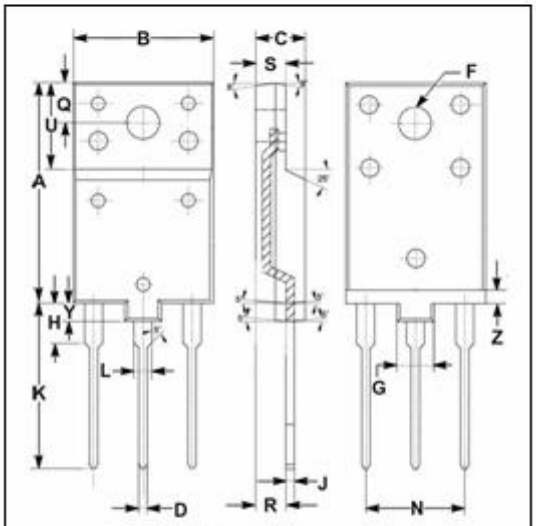


APPLICATIONS

- Designed for color TV horizontal output applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous	3.5	A
I_B	Base Current- Continuous	1	A
P_C	Collector Power Dissipation @ T_a=25℃	3.5	W
	Collector Power Dissipation @ T_C=25℃	40	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	24.10	24.70
B	15.20	15.80
C	5.20	5.80
D	0.65	1.05
F	3.30	3.90
G	3.90	4.10
H	4.30	4.70
J	0.80	1.00
K	18.30	18.70
L	1.90	2.40
N	10.70	11.10
Q	4.40	4.60
R	3.30	3.70
S	3.20	3.40
U	9.50	9.70
Y	1.90	2.10
Z	1.40	1.60

isc Silicon NPN Power Transistor 2SD2089

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 200mA; I_C= 0	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=2.2A; I_B= 0.7A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C=2.2A; I_B= 0.7A			1.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0			10	μA
h_{FE}	DC Current Gain	I_C= 0. 5A; V_{CE}= 5V	9		18	
V_{ECF}	C-E Diode Forward Voltage	I_F= 2.2A			1.5	V
f_T	Current-Gain—Bandwidth Product	I_C= 0.1A; V_{CE}= 10V		3		MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V;f_{test}=1.0MHz		95		pF
t_f	Fall Time	I_{CP}= 2.2A, $I_{B1(end)}$= 0.7A			0.5	μs