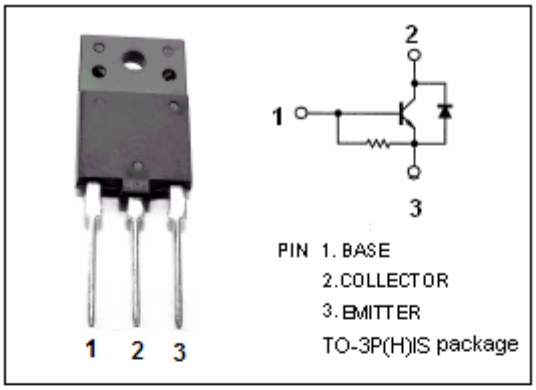
isc Silicon NPN Power Transistor S2055N

DESCRIPTION

- High Voltage
- High Switching Speed
- Low Saturation Voltage
- Built-in Damper Diode



APPLICATIONS

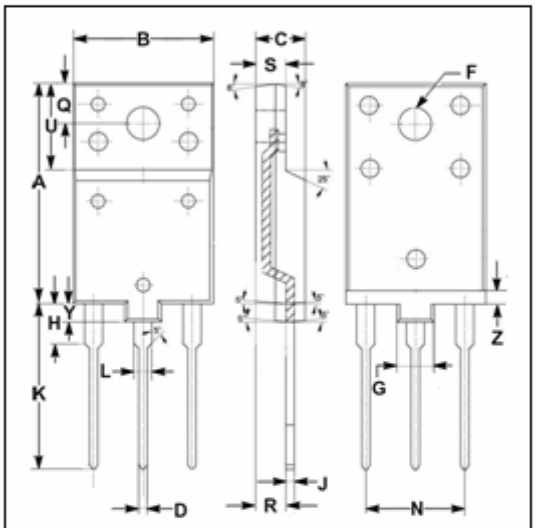
- Color TV horizontal output applications

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	1500	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-peak	15	A
I_B	Base Current	4	A
P_C	Collector Power Dissipation @ T_C= 25℃	50	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.5	℃/W



DIM	mm MIN	MAX
A	24.30	24.70
B	15.20	15.80
C	5.20	5.80
D	0.65	0.85
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	2.10
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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=500mA;V_{BE}= -1.7V; L= 40mH	700			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 400mA; I_C= 0	5			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 4.5A; I_B= 2A			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 4.5A; I_B= 1A			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4.5A; I_B= 1A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 1500V; V_{BE}= 0			1.0	mA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}= 5V	8		25	
h_{FE-2}	DC Current Gain	I_C= 4.5A; V_{CE}= 5V	4.5		9	
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1MHz		95		pF
f_T	Current-Gain—Bandwidth Product	I_C= 0.1A; V_{CE}= 10V		2		MHz
V_{ECF}	C-E Diode Forward Voltage	I_F= 6A			2.0	V
Switching Times						
t_s	Storage Time	I_C= 4.5A; $I_{B1(end)}$= 1A; f_H= 15.75kHz			11	μs
t_f	Fall Time				0.6	μs