

Silicon NPN Power Transistors

S2055N

DESCRIPTION

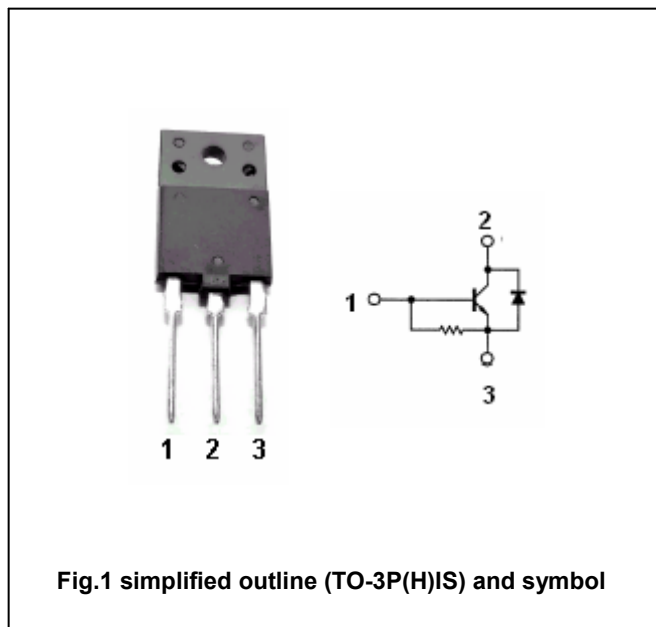
- With TO-3P(H)IS package
- High voltage,high speed
- Low collector saturation voltage
- Built-in damper diode

APPLICATIONS

- Color TV horizontal output applications
- Color TV switching regulator applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

ABSOLUTE MAXIMUM RATINGS ($T_C=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{CEO}	Collector-emitter voltage	Open base	700	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		8	A
I_{CM}	Collector current-peak		15	A
I_B	Base current		4	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	50	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-C}$	Thermal resistance from junction to case	2.5	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

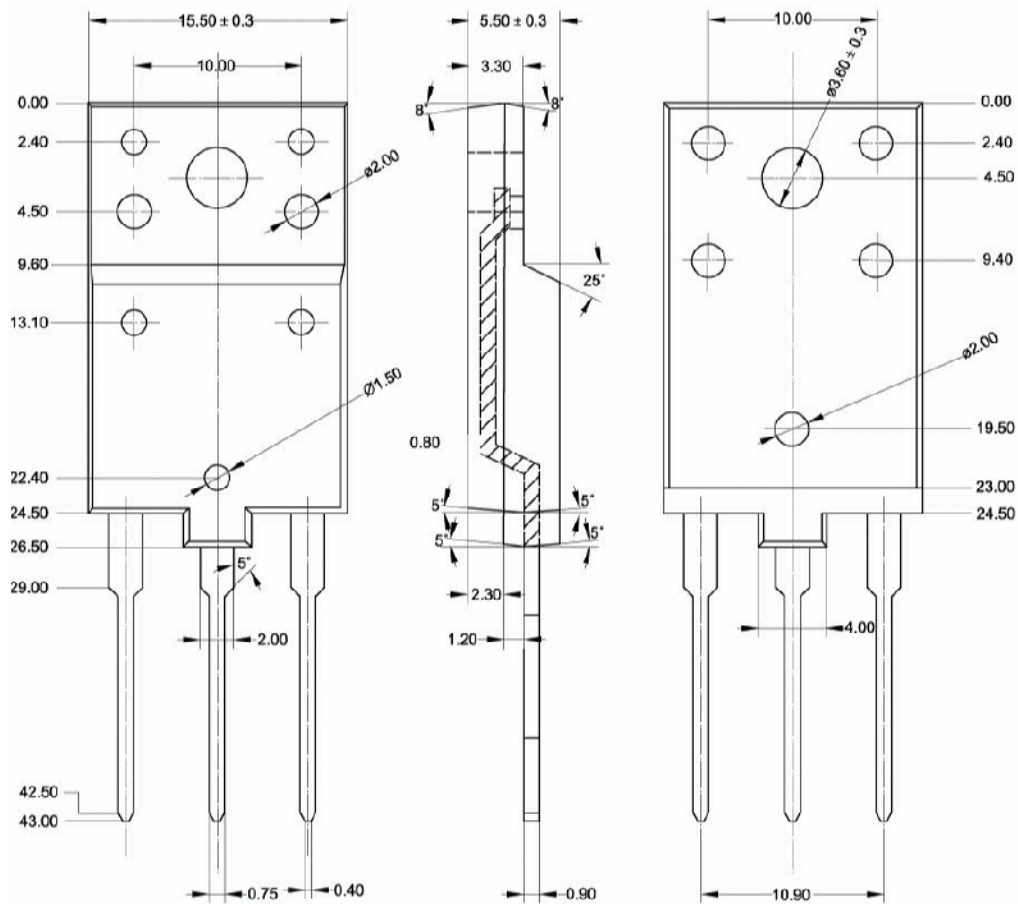
Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-emitter sustaining voltage	$I_B=500mA$; $V_{BE}=-1.7V$; $L=40mH$	700			V
$V_{CE(sat)-1}$	Collector-emitter saturation voltage	$I_C=4.5A$; $I_B=2.0A$			1.0	V
$V_{CE(sat)-2}$	Collector-emitter saturation voltage	$I_C=4.5A$; $I_B=1.0A$			5.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=4.5A$; $I_B=1.0A$			1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=1500V$; $V_{BE}=0$			1.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V$; $I_C=0$			300	mA
h_{FE-1}	DC current gain	$I_C=1A$; $V_{CE}=5V$	10		30	
h_{FE-2}	DC current gain	$I_C=4.5A$; $V_{CE}=5V$	4.5		9	
C_{OB}	Collector output capacitance	$I_E=0$; $V_{CB}=10V$; $f=1MHz$		95		pF
f_T	Transition frequency	$I_C=0.1A$; $V_{CE}=10V$		2		MHz

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)