Silicon NPN Power Transistors 2SC4110

DESCRIPTION

·With TO-3PN package
·Fast switching speed
·Wide area of safe operation
·High voltage,high reliability

APPLICATIONS

·For switching regulator applications

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

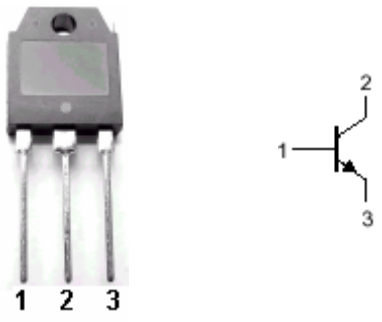

Fig.1 simplified outline (TO-3PN) and symbol

ABSOLUTE MAXIMUM RATINGS(T_C=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		25	A
I_{CP}	Collector current-peak		40	A
I_B	Base current		8	A
P_C	Collector power dissipation	T_C=25□	160	W
		T_a=25□	2.5	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ;R_{BE}=∞	400			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA; I_E=0	500			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA; I_C=0	7			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=16A; I_B=3.2A			0.8	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=16A; I_B=3.2A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=400V; I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			10	μA
h_{FE-1}	DC current gain	I_C=3.2A ; V_{CE}=5V	15		50	
h_{FE-2}	DC current gain	I_C=16A ; V_{CE}=5V	10			
h_{FE-3}	DC current gain	I_C=10mA ; V_{CE}=5V	10			
f_T	Transition frequency	I_C=3.2A ; V_{CE}=10V		20		MHz
C_{ob}	Output capacitance	I_E=0; V_{CB}=10V,f=1MHz		300		pF

Switching times

t_{on}	Turn-on time	I_C=20A; I_{B1}=4A;I_{B2}=-8A R_L=10Ω;V_{CC}=200V			0.5	μs
t_s	Storage time				2.5	μs
t_f	Fall time				0.3	μs

PACKAGE OUTLINE

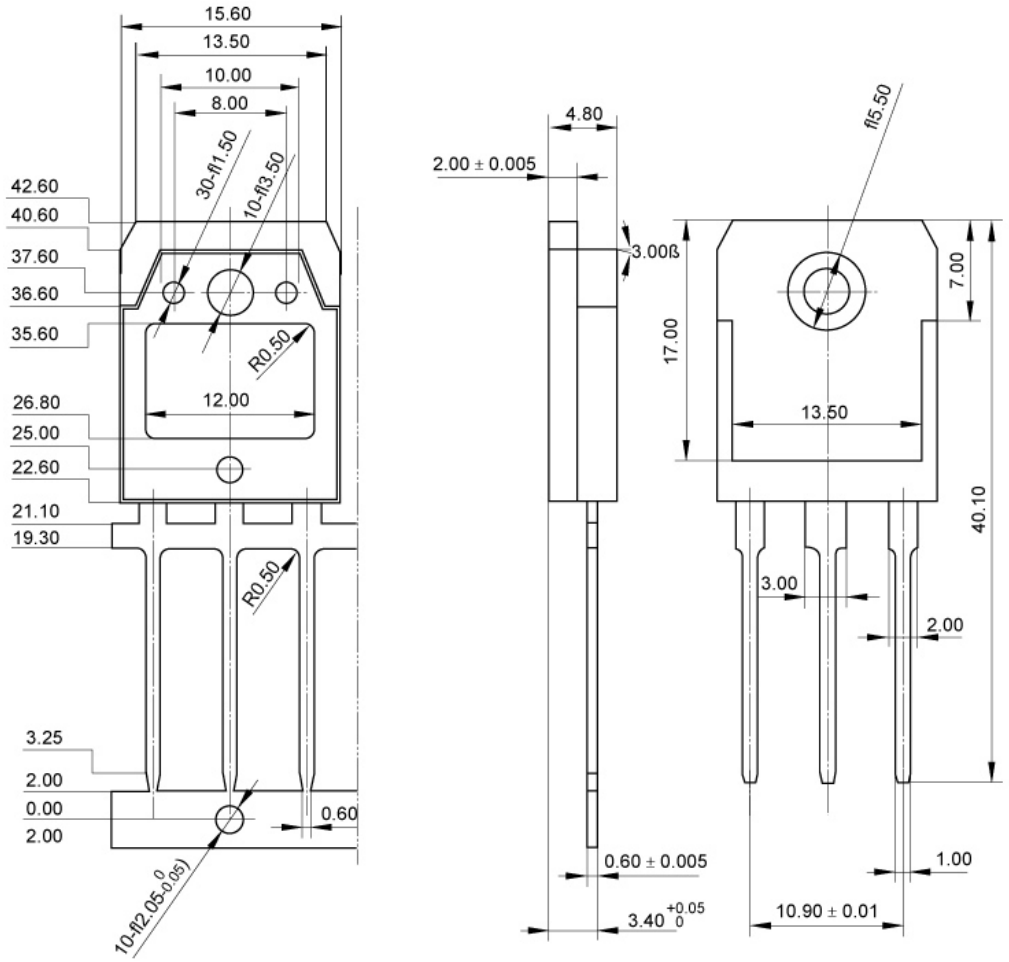

Fig.2 outline dimensions (unindicated tolerance:±0.1mm)