Silicon NPN Power Transistors 2N6383 2N6384 2N6385

DESCRIPTION

·With TO-3 package
·Complement to type 2N6648/6649/6650
·DARLINGTON
·High DC current gain

APPLICATIONS

·Designed for low and medium frequency power application such as power switching audio amplifer ,hammer drivers and shunt and series regulators

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

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6383	Open emitter	40	V
		2N6384		60	
		2N6385		80	
V_{CEO}	Collector-emitter voltage	2N6383	Open base	40	V
		2N6384		60	
		2N6385		80	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			10	A
I_{CM}	Collector current-peak			15	A
I_B	Base current			0.25	A
P_D	Total Power Dissipation		T_C=25□	100	W
T_j	Junction temperature			200	□
T_{stg}	Storage temperature			-65~200	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	1.75	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	2N6383	I_C=0.2A ;I_B=0	40			V
		2N6384		60			
		2N6385		80			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=5A; I_B=10mA			2.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=10A ;I_B=100mA			3.0	V
V_{BE-1}	Base-emitter on voltage		I_C=5A ; V_{CE}=3V			2.8	V
V_{BE-2}	Base-emitter on voltage		I_C=10A ; V_{CE}=3V			4.5	V
I_{CEO}	Collector cut-off current	2N6383	V_{CE}=40V; I_B=0			1.0	mA
		2N6384	V_{CE}=60V; I_B=0				
		2N6385	V_{CE}=80V; I_B=0				
I_{CEX}	Collector cut-off current	2N6383	V_{CE}=40V; V_{BE}=-1.5V T_C=125□			0.3 3.0	mA
		2N6384	V_{CE}=60V; V_{BE}=-1.5V T_C=125□			0.3 3.0	
		2N6385	V_{CE}=80V; V_{BE}=-1.5V T_C=125□			0.3 3.0	
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			10	mA
h_{FE-1}	DC current gain		I_C=5A ; V_{CE}=3V	1000		20000	
h_{FE-2}	DC current gain		I_C=10A ; V_{CE}=3V	100			
C_{OB}	Output capacitance		I_E=0; V_{CB}=10V;f=1MHz			200	pF

PACKAGE OUTLINE

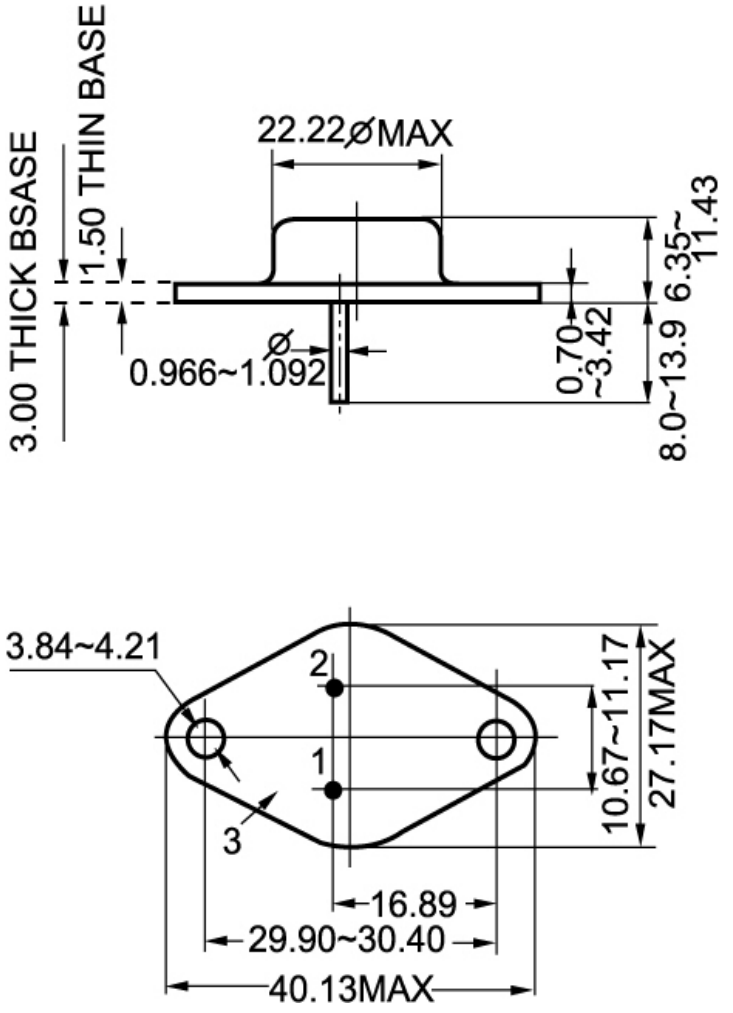

Fig.2 outline dimensions (unindicated tolerance:±0.10mm)