Silicon NPN Power Transistors 2N5427 2N5429

DESCRIPTION

·With TO-66 package
·Excellent safe operating area
·Low collector saturation voltage

APPLICATIONS

·For switching and wide-band amplifier applications.

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

Fig.1 simplified outline (TO-66) and symbol

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N5427	Open emitter	80	V
		2N5429		100	
V_{CEO}	Collector-emitter voltage	2N5427	Open base	80	V
		2N5429		100	
V_{EBO}	Emitter-base voltage		Open collector	6	V
I_C	Collector current			7	A
I_B	Base current			1	A
P_D	Total power dissipation		T_C=25□	40	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	4.37	□/W

Silicon NPN Power Transistors 2N5427 2N5429

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	2N5427	I_C=50mA ;I_B=0	80			V
		2N5429		100			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=2A; I_B=0.2A			0.7	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=7A ;I_B=0.7A			1.2	V
$V_{BE\ sat-1}$	Base-emitter saturation voltage		I_C=2A; I_B=0.2A			1.2	V
$V_{BE\ sat-2}$	Base-emitter saturation voltage		I_C=7A ;I_B=0.7A			2.0	V
I_{CBO}	Collector cut-off current		V_{CB}=Rated V_{CBO}; I_E=0			0.1	mA
I_{CEX}	Collector cut-off current	2N5427	V_{CE}= 75V; $V_{BE(off)}$=-1.5V T_C=150□			0.1 1.0	mA
		2N5429	V_{CE}= 90V; $V_{BE(off)}$=-1.5V T_C=150□			0.1 1.0	
I_{EBO}	Emitter cut-off current		V_{EB}=6V; I_C=0			0.1	mA
h_{FE-1}	DC current gain		I_C=0.5A ; V_{CE}=2V	30			
h_{FE-2}	DC current gain		I_C=2A ; V_{CE}=2V	30		120	
h_{FE-3}	DC current gain		I_C=5A ; V_{CE}=2V	20			
f_T	Transition frequency		I_C=0.5A ; V_{CE}=10V;f=10MHz	20			MHz

PACKAGE OUTLINE

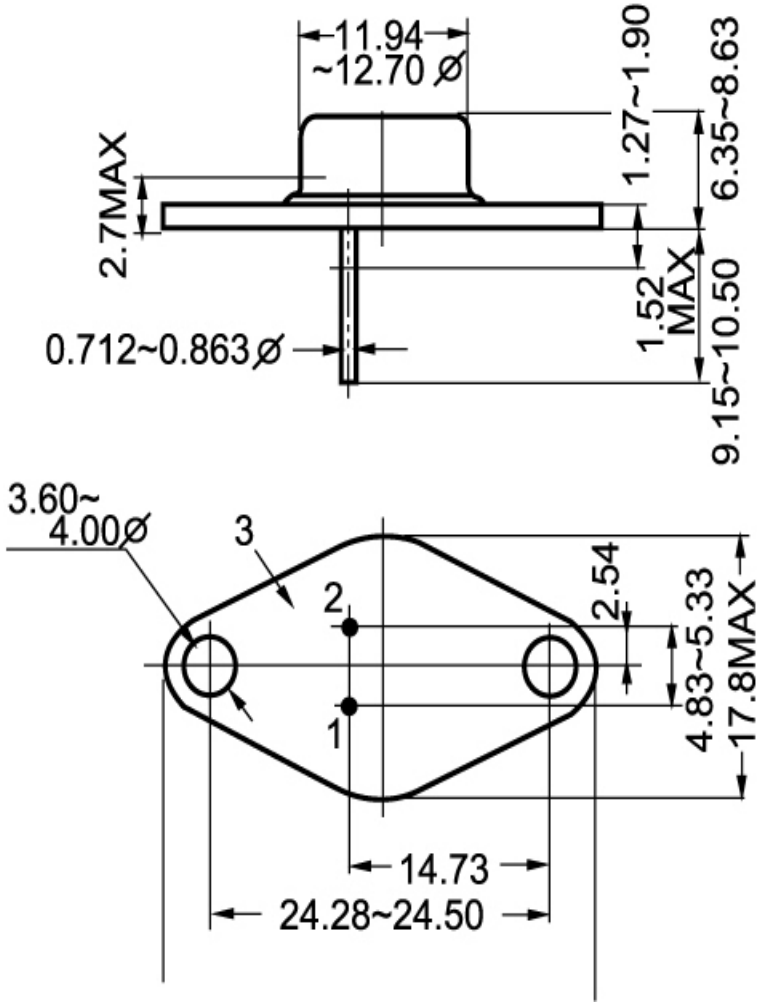

Fig.2 outline dimensions