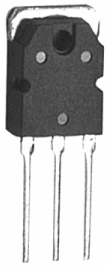
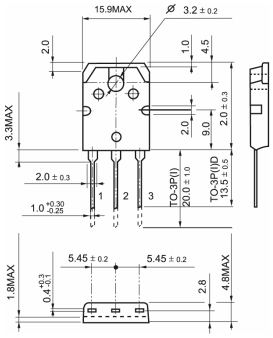
2SD716 SILICON EPITAXIAL PLANAR TRANSISTOR

GENERAL DESCRIPTION

Silicon NPN high frequency, high power transistors in a plastic envelope, primarily for use in audio and general purpose





TO-3P(I)D

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QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{CESM}	Collector-emitter voltage peak value	V_{BE} = 0V	-	100	V
V_{CEO}	Collector-emitter voltage (open base)		-	100	V
I_C	Collector current (DC)		-	6	A
I_{CM}	Collector current peak value		-		A
P_{tot}	Total power dissipation	T_{mb}≤25℃	-	60	W
V_{CEsat}	Collector-emitter saturation voltage	I_C = 3.0A; I_B = 0.3A	-	2	V
V_F	Diode forward voltage	I_F = 3.0A	1.5	2.0	V
t_f	Fall time			-	μ s

LIMITING VALUES

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{CESM}	Collector-emitter voltage peak value	V_{BE} = 0V	-	100	V
V_{CEO}	Collector-emitter voltage (open base)		-	100	V
V_{EBO}	Emitter-base oltage (open colloctor)			5	V
I_C	Collector current (DC)		-	6	A
I_B	Base current (DC)		-	1.5	A
P_{tot}	Total power dissipation	Tmb≤25℃	-	60	W
T_{stg}	Storage temperature		-55	150	℃
T_j	Junction temperature		-	150	℃

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
I_{CBO}	Collector-base cut-off current	V_{CB}=100V	-	0.2	mA
I_{EBO}	Emitter-base cut-off current	V_{EB}=5V	-	0.2	mA
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=1mA	100		V
V_{CEsat}	Collector-emitter saturation voltages	I_C = 3.0A; I_B = 0.3A	-	2	V
h_{FE}	DC current gain	I_C = 1A; V_{CE} = 5V	50	250	
f_T	Transition frequency at f = 5MHz	I_C = 1A; V_{CE} = 12V	12	-	MHz
C_c	Collector capacitance at f = 1MHz	V_{CB} = 10V		150	pF
t_{on}	On times				us
t_s	Tum-off storage time				us
t_f	Fall time				us

Wing Shing Computer Components Co., (H.K.)Ltd. Tel:(852)2341 9276 Fax:(852)2797 8153
Homepage: http://www.wingshing.com E-mail: wsccltd@hkstar.com

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