

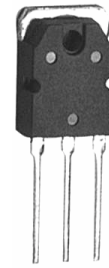


**2SD717**

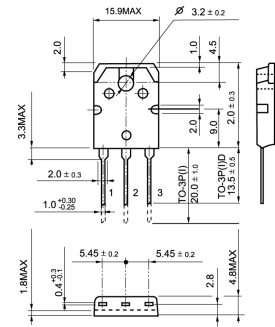
**Silicon Epitaxial Planar Transistor**

**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



**QUICK REFERENCE DATA**

SYMBOL	PARAMETER	CONDITIONS	TYP	MAX	UNIT
$V_{CB0}$	Collector-emitter voltage peak value	$V_{BE} = 0V$	-	70	V
$V_{CEO}$	Collector-emitter voltage (open base)		-	70	V
$I_C$	Collector current (DC)		-	10	A
$I_{CM}$	Collector current peak value		-		A
$P_{tot}$	Total power dissipation	$T_{mb} \leq 25^\circ C$	-	80	W
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C = 4.0A; I_B = 0.4A$	-	2	V
$V_F$	Diode forward voltage	$I_F = 3.5A$	1.5	2.0	V
$t_f$	Fall time	$I_C = 4A, I_{B1} = -I_{B2} = 0.4A, V_{CC} = 30V$	0.4	1.0-	$\mu s$

**LIMITING VALUES**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CESM}$	Collector-emitter voltage peak value	$V_{BE} = 0V$	-	70	V
$V_{CEO}$	Collector-emitter voltage (open base)		-	70	V
$V_{EBO}$	Emitter-base voltage (open collector)			5	V
$I_C$	Collector current (DC)		-	10	A
$I_B$	Base current (DC)		-	2.5	A
$P_{tot}$	Total power dissipation	$T_{mb} \leq 25^\circ C$	-	80	W
$T_{sta}$	Storage temperature		-55	150	$^\circ C$
$T_j$	Junction temperature		-	150	$^\circ C$

**ELECTRICAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	TYP	MAX	UNIT
$I_{CB0}$	Collector-base cut-off current	$V_{CB} = 70V$	-	0.2	mA
$I_{EBO}$	Emitter-base cut-off current	$V_{EB} = 5V$	-	0.2	mA
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = 1mA$	70		V
$V_{CEsat}$	Collector-emitter saturation voltages	$I_C = 4.0A; I_B = 0.4A$	-	3	V
$h_{FE}$	DC current gain	$I_C = 1A; V_{CE} = 5V$	50	240	
$f_T$	Transition frequency at $f = 5MHz$	$I_C = 1A; V_{CE} = 12V$	10	-	MHz
$C_c$	Collector capacitance at $f = 1MHz$	$V_{CB} = 10V$	350	-	pF
$t_{on}$	On times	$I_C = 4A, I_{B1} = -I_{B2} = 0.4A, V_{CC} = 30V$	0.3		us
$t_s$	Turn-off storage time	$I_C = 4A, I_{B1} = -I_{B2} = 0.4A, V_{CC} = 30V$	2.5		us
$t_f$	Fall time	$I_C = 4A, I_{B1} = -I_{B2} = 0.4A, V_{CC} = 30V$	0.4		us