



# MJ15015

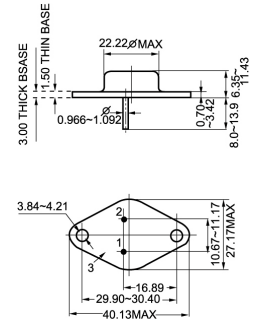
# Silicon Epitaxial Planar Transistor

## GENERAL DESCRIPTION

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



TO-3



## QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	TYP	MAX	UNIT
$V_{CESM}$	Collector-emitter voltage peak value	$V_{BE} = 0V$	-	200	V
$V_{CEO}$	Collector-emitter voltage (open base)		-	120	V
$I_C$	Collector current (DC)		-	15	A
$I_{CM}$	Collector current peak value		-		A
$P_{tot}$	Total power dissipation	$T_{mb} \leq 25^\circ C$	-	180	W
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C = 4.0A; I_B = 0.4A$	-	1.5	V
$V_F$	Diode forward voltage	$I_F = 4.0A$	1.5	2.0	V
$t_f$	Fall time	$I_C=4A, I_{B1}=-I_{B2}=0.4A, V_{CC}=30V$		6.0	$\mu s$

## LIMITING VALUES

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CESM}$	Collector-emitter voltage peak value	$V_{BE} = 0V$	-	200	V
$V_{CEO}$	Collector-emitter voltage (open base)		-	120	V
$V_{EBO}$	Emitter-base voltage (open collector)			5	V
$I_C$	Collector current (DC)		-	15	A
$I_B$	Base current (DC)		-	7	A
$P_{tot}$	Total power dissipation	$T_{mb} \leq 25^\circ C$	-	180	W
$T_{sta}$	Storage temperature		-55	150	$^\circ C$
$T_j$	Junction temperature		-	150	$^\circ C$

## ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	TYP	MAX	UNIT
$I_{CBO}$	Collector-base cut-off current	$V_{BE} = 0V; V_{CE} = V_{CESMmax}$	-	0.2	mA
$I_{EBO}$	Emitter-base cut-off current	$V_{BE} = 0V; V_{CE} = V_{CESMmax}$	-	0.2	mA
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$T_j = 125^\circ C$	120		V
$V_{CEsat}$	Collector-emitter saturation voltages	$I_C = 4.5A; I_B = 1.6A$	-	1.5	V
$h_{FE}$	DC current gain	$I_C = 100mA; V_{CE} = 5V$	30	150	
$f_T$	Transition frequency at $f = 5MHz$	$I_C = 0.1A; V_{CE} = 5V$	3	-	MHz
$C_c$	Collector capacitance at $f = 1MHz$	$V_{CB} = 10V$		600-	pF
$t_{on}$	On times	$I_C=4A, I_{B1}=-I_{B2}=0.4A, V_{CC}=30V$		4.5	us
$t_s$	Turn-off storage time	$I_C=4A, I_{B1}=-I_{B2}=0.4A, V_{CC}=30V$		3.0	us
$t_f$	Fall time	$I_C=4A, I_{B1}=-I_{B2}=0.4A, V_{CC}=30V$		6.0	us