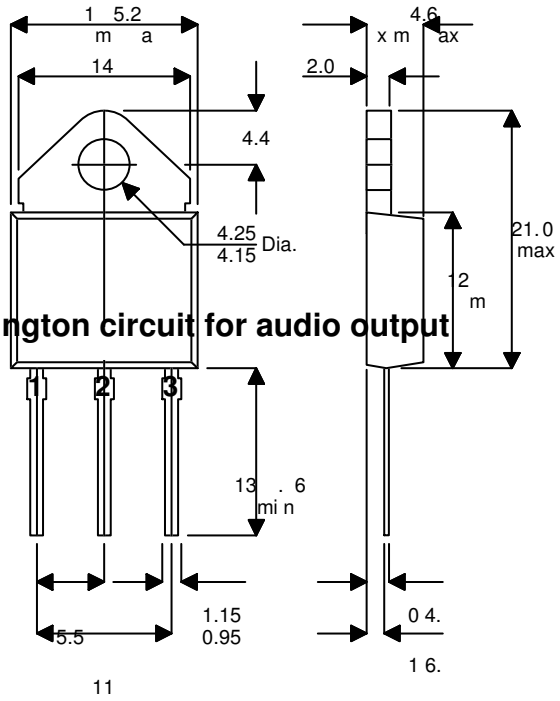
MAGNA
TEC

T64
T65

MECHANICAL DATA
Dimensions in mm



SOT 93

Pin 1 ? Base
Pin 2 ? Collector
Pin 3 ? Emitter

SILICON DARLINGTON POWER TRANSISTORS

Complementary epitaxial base transistors in monolithic Darlington circuit for audio output stages and general amplifier and switching applications.

The T64 is PNP and the T65 is NPN

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25¡C unless otherwise stated)			
		T64	T65
V_{CBO}	Collector ? Base Voltage (Open Emitter)	?120V	120V
V_{CEO}	Collector ? Emitter Voltage (Open Base)	?120V	120V
V_{EBO}	Emitter ? Base Voltage (Open Collector)	?5V	5V
I_C	Collector Current (d.c)	12A	
I_{CM}	Peak Collector Current	20A	
I_B	Base Current (d.c)	0.5A	
P_{tot}	Total Power Dissipation up to T_{mb}= 25¡C	125W	
T_{stg}	Storage Temperature Range	?65 to 150¡C	
T_j	Maximum Junction Temperature	150¡C	

MAGNA TEC

T64
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ELECTRICAL CHARACTERISTICS (T_j = 25¡C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
V_{BE*}	Base ? Emitter Voltage	I_C = 5A	V_{CE} = 4V			2.5	V
$V_{CE(sat)*}$	Collector ? Emitter Saturation Voltage	I_C = 5A	I_B = 20mA			2	V
I_{CBO}	Collector ? Base Cut-off Current	I_E = 0	V_{CB} = $V_{CBO(max)}$			400	mA
		I_E = 0 T_j = 150¡C	V_{CB} = ¨$V_{CBO(max)}$			2	mA
		I_B = 0	V_{CB} = ¨$V_{CBO(max)}$			1	
I_{EBO}	Emitter Cut-off Current	I_C = 0	V_{EB} = 5V			5	mA
h_{FE*}	DC Current Gain	I_C = 1A	V_{CE} = 4V		1500		?
		I_C = 5A	V_{CE} = 4V	1000			
		I_C = 10A	V_{CE} = 4V		1750		
C_c	Collector Capacitance	I_E = I_e = 0 f = 1 MHz	V_{CB} = 10V		150		pF
f_{hfe}	Cut-off Frequency	I_C = 5A	V_{CE} = 4V		70		kHz
V_F	Diode Forward Voltage	I_F = 5A			1.2		V
		I_F = 12A			2		

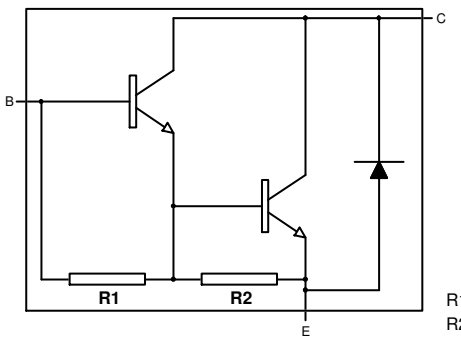
* Pulse test t_p < 300ms ,d <2%

SWITCHING CHARACTERISTICS (T_{case} = 25¡C unless otherwise stated)

Parameter		Test Conditions	Min.	Typ.	Max.	Unit
t_{on}	Turn-On Time	$I_{C(on)}$ = 5A V_{CC} = 16V $I_{B(on)}$ = ? $I_{B(off)}$ = 20mA		1		ms
t_f	Fall Time			3		
t_{off}	Turn-Off Time			6		

THERMAL DATA

$R_{THj?mb}$	Thermal Resistance Junction ? Mounting Base	Max. 1 K / W



R1 typical 5k♣
R2 typical 80♣