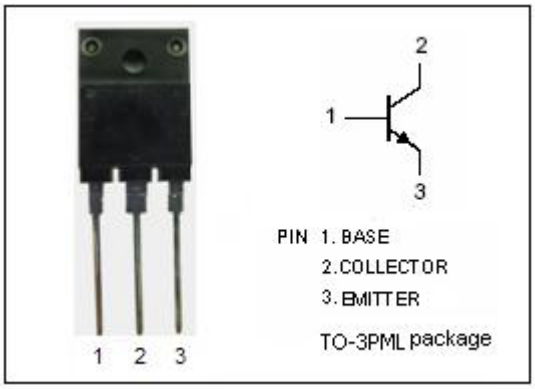
isc Silicon NPN Power Transistor MD2001FX

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 700V (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

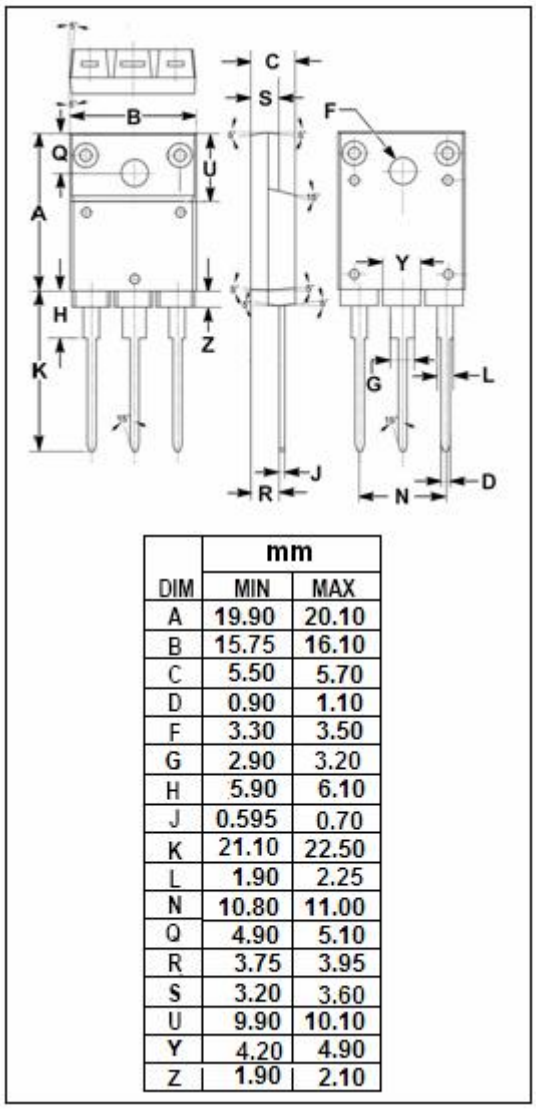
- Horizontal deflection output for monitor and real flat TV
- Switch mode power supplies for CRT TV

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current- Continuous	12	A
I_{CM}	Collector peak current (tp<5ms)	18	A
I_B	Base Current- Continuous	6	A
P_{TOT}	Total dissipation at T_C=25℃	58	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.15	℃/W



DIM	mm MIN	MAX
A	19.90	20.10
B	15.75	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.20
H	5.90	6.10
J	0.595	0.70
K	21.10	22.50
L	1.90	2.25
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.60
U	9.90	10.10
Y	4.20	4.90
Z	1.90	2.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(sus)}$(1)	Collector-emitter sustaining Voltage	I_C= 50mA; I_C= 0	700			V
$V_{CE(sat)}$(1)	Collector-Emitter Saturation Voltage	I_C= 6.0A; I_B=1.5A			1.8	V
$V_{BE(sat)}$(1)	Base-Emitter Saturation Voltage	I_C= 6.0A; I_B=1.5A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 1500V ; I_E= 0 V_{CB}= 1500V ; I_E= 0 ,TC=125			0.2 2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 9V ; I_C= 0			1	mA
h_{FE-1}(1)	DC Current Gain	I_C= 6A ; V_{CE}= 1V		4.5		
h_{FE-2}(1)	DC Current Gain	I_C= 6A ; V_{CE}= 5V	4.5		7	
Switching times						
t_s	Storage Time	I_{CP}= 5A , $I_{B(on))}$= 0.9A ; f_H= 64kHz $V_{BE(Off)}$=-2.7V, $L_{BB(OFF)}$=1.6uH		2.6		μs
t_f	Fall Time			0.2		μs

1. Pulsed duration =300us,duty cycle ≤1.5%