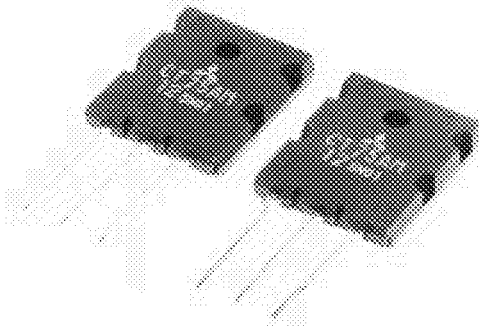


CT75AM-12

GENERAL INVERTER • UPS USE

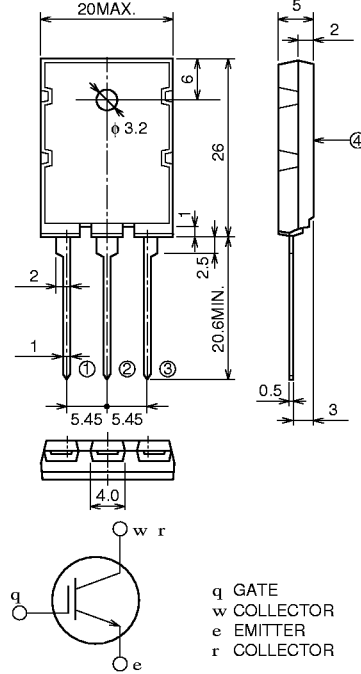
CT75AM-12



- V_{CES} 600V
- I_C 75A
- High Speed Switching
- Low V_{CE} Saturation Voltage

OUTLINE DRAWING

Dimensions in mm



APPLICATION

AC & DC motor controls, General purpose inverters, UPS, Power supply switching, Servo controls, etc.

MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Ratings	Unit
V_{CES}	Collector-emitter voltage	$V_{GE} = 0V$	600	V
V_{GES}	Gate-emitter voltage	$V_{CE} = 0V$	± 20	V
V_{GEM}	Peak gate-emitter voltage	$V_{CE} = 0V$	± 30	V
I_C	Collector current		75	A
I_{CM}	Collector current (Pulsed)		150	A
P_C	Maximum power dissipation		300	W
T_j	Junction temperature		$-40 \sim +150$	$^\circ\text{C}$
T_{stg}	Storage temperature		$-40 \sim +150$	$^\circ\text{C}$
—	Weight	Typical value	9.8	g

ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
$V_{(BR)CES}$	Collector-emitter breakdown voltage	$I_C = 1\text{mA}$, $V_{GE} = 0\text{V}$	600	—	—	V
I_{GES}	Collector-emitter leakage current	$V_{GE} = \pm 30\text{V}$, $V_{CE} = 0\text{V}$	—	—	± 0.5	μA
I_{CES}	Gate-emitter leakage current	$V_{CE} = 600\text{V}$, $V_{GE} = 0\text{V}$	—	—	1	mA
$V_{GE(th)}$	Gate-emitter threshold voltage	$I_C = 7.5\text{mA}$, $V_{CE} = 10\text{V}$	4.5	6.0	7.5	V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 75\text{A}$, $V_{GE} = 15\text{V}$	—	2.5	3.0	V
C_{ies}	Input capacitance	$V_{CE} = 25\text{V}$, $V_{GE} = 0\text{V}$, $f = 1\text{MHz}$	—	3100	—	pF
C_{oes}	Output capacitance		—	400	—	pF
C_{res}	Reverse transfer capacitance		—	130	—	pF
$t_d(\text{on})$	Turn-on delay time	$V_{CC} = 300\text{V}$, Resistance load, $I_C = 75\text{A}$, $V_{GE} = 15\text{V}$, $R_{GE} = 10\Omega$	—	40	—	ns
t_r	Rise time		—	265	—	ns
$t_d(\text{off})$	Turn-off delay time		—	175	—	ns
t_f	Fall time		—	245	—	ns
$R_{th(j-c)}$	Thermal resistance	Junction to case	—	—	0.42	$^\circ\text{C/W}$

PERFORMANCE CURVES

