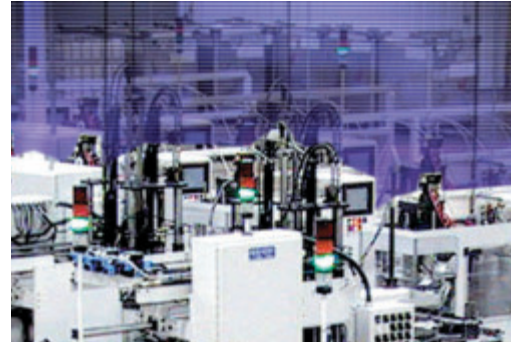


1.07 3rd Generation Standard IGBT Modules (U-Series)

Features:

- Innovative package technology for a full optimisation of the chip performance
- Low EMI
- Improved Free Wheeling Diode characteristics
- Higher reliability due to solderless connections
- Lower internal inductance (50% reduction vs. conventional 3rd Generation Module)



Line-up U-Series

Symbol	Circuit Diagram	V _{CES} (V)	I _c (A)								
			50	75	100	150	200	300	400	600	800
H		600									CM600HU-12H
		1200								CM400HU-24H	CM600HU-24H
D		600		CM75DU-12H	CM100DU-12H	CM150DU-12H	CM200DU-12H	CM300DU-12H	CM400DU-12H		CM800DU-12H
		1200	CM50DU-24H	CM75DU-24H	CM100DU-24H	CM150DU-24H	CM200DU-24H	CM300DU-24H	CM400DU-24H		
B		600		CM75BU-12H	CM100BU-12H						
		1200	CM50BU-24H								
T		600		CM75TU-12H	CM100TU-12H	CM150TU-12H	CM200TU-12H				
		1200	CM50TU-24H	CM75TU-24H	CM100TU-24H						
E3		600		CM75E3U-12H	CM100E3U-12H	CM150E3U-12H	CM200E3U-12H	CM300E3U-12H			
		1200	CM50E3U-24H	CM75E3U-24H	CM100E3U-24H	CM150E3U-24H					

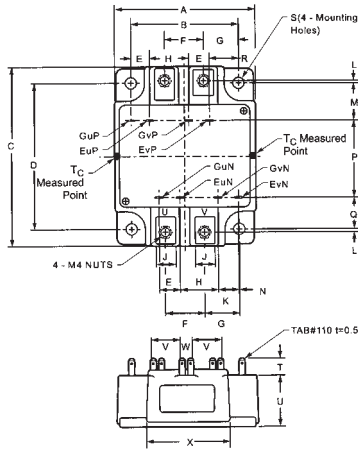
1.07 3rd Generation Standard IGBT Modules (U-Series)



Type Number	Maximum Ratings		Electrical Characteristics										Free Wheel Diode			Thermal & Mechanical Characteristics			Package- No.
	V _{CES} (V)	I _C (A)	V _{CE(sat)} @ T _J = 25°C (V)		C _{ies} (nF)	C _{Oes} (nF)	C _{res} (nF)	Maximum Switching Times				V _f (V)	Q _{rr} (μC)	t _{rr} (ns)	IGBT R _{th(j-c)} (°C/W)	Diode R _{th(j-c)} (°C/W)	R _{th(c-f)} (°C/W)		
			Typ.	Max.				t _{d(on)} (ns)	t _r (ns)	t _{d(off)} (ns)	t _f (ns)								
600 Volt IGBT Modules																			
CM75BU-12H	600	75	2.4	3.0	6.6	3.6	1.0	100	250	200	300	2.6	0.18	160	0.40	0.90	0.025	U1	
CM75DU-12H	600	75	2.4	3.0	6.6	3.6	1.0	100	250	200	300	2.6	0.18	160	0.40	0.90	0.035	U8	
CM75E3U-12H	600	75	2.4	3.0	6.6	3.6	1.0	100	250	200	300	2.6	0.18	160	0.40	0.90	0.035	U8	
CM75TU-12H	600	75	2.4	3.0	6.6	3.6	1.0	100	250	200	300	2.6	0.18	160	0.40	0.90	0.018	U4	
CM100BU-12H	600	100	2.4	3.0	8.8	4.8	1.3	100	250	200	300	2.6	0.24	160	0.31	0.70	0.025	U1	
CM100DU-12H	600	100	2.4	3.0	8.8	4.8	1.3	100	250	200	300	2.6	0.24	160	0.31	0.70	0.035	U8	
CM100E3U-12H	600	100	2.4	3.0	8.8	4.8	1.3	100	250	200	300	2.6	0.24	160	0.31	0.70	0.035	U8	
CM100TU-12H	600	100	2.4	3.0	8.8	4.8	1.3	100	250	200	300	2.6	0.24	160	0.31	0.70	0.018	U4	
CM150DU-12H	600	150	2.4	3.0	13.2	7.2	2.0	100	350	300	300	2.6	0.36	160	0.21	0.47	0.035	U8	
CM150E3U-12H	600	150	2.4	3.0	13.2	7.2	2.0	100	350	300	300	2.6	0.36	160	0.21	0.47	0.035	U8	
CM150TU-12H	600	150	2.4	3.0	13.2	7.2	2.0	100	350	300	300	2.6	0.36	160	0.21	0.47	0.015	U5	
CM200DU-12H	600	200	2.4	3.0	17.6	9.6	2.6	150	400	300	300	2.6	0.48	160	0.19	0.35	0.035	U8	
CM200E3U-12H	600	200	2.4	3.0	17.6	9.6	2.6	150	400	300	300	2.6	0.48	160	0.19	0.35	0.035	U8	
CM200TU-12H	600	200	2.4	3.0	17.6	9.6	2.6	150	400	300	300	2.6	0.48	160	0.19	0.35	0.015	U5	
CM300DU-12H	600	300	2.4	3.0	26.4	14.4	4.0	250	600	350	300	2.6	0.72	160	0.14	0.24	0.020	U2	
CM300E3U-12H	600	300	2.4	3.0	26.4	14.4	4.0	250	600	350	300	2.6	0.72	160	0.14	0.24	0.020	U2	
CM400DU-12H	600	400	2.4	3.0	35.2	19.2	5.2	250	600	350	300	2.6	0.96	160	0.11	0.18	0.020	U2	
CM600HU-12H	600	600	2.4	3.0	52.8	28.8	7.8	300	600	350	300	2.6	1.44	160	0.08	0.12	0.020	U6	
1200 Volt IGBT Modules																			
CM50BU-24H	1200	50	2.9	3.7	7.5	2.6	1.5	80	200	150	350	3.2	0.28	300	0.31	0.70	0.100	U1	
CM50DU-24H	1200	50	2.9	3.7	7.5	2.6	1.5	80	200	150	350	3.2	0.28	300	0.31	0.70	0.035	U8	
CM50E3U-24H	1200	50	2.9	3.7	7.5	2.6	1.5	80	200	150	350	3.2	0.28	300	0.31	0.70	0.035	U8	
CM50TU-24H	1200	50	2.9	3.7	7.5	2.6	1.5	80	200	150	350	3.2	0.28	300	0.31	0.70	0.018	U4	
CM75DU-24H	1200	75	2.9	3.7	11	3.7	2.2	100	200	250	350	3.2	0.41	300	0.21	0.47	0.035	U8	
CM75E3U-24H	1200	75	2.9	3.7	11	3.7	2.2	100	200	250	350	3.2	0.41	300	0.21	0.47	0.035	U8	
CM75TU-24H	1200	75	2.9	3.7	11	3.7	2.2	100	200	250	350	3.2	0.41	300	0.21	0.47	0.015	U5	
CM100DU-24H	1200	100	2.9	3.7	15	5.0	3.0	100	200	300	350	3.2	0.55	300	0.19	0.35	0.035	U8	
CM100E3U-24H	1200	100	2.9	3.7	15	5.0	3.0	100	200	300	350	3.2	0.55	300	0.19	0.35	0.035	U8	
CM100TU-24H	1200	100	2.9	3.7	15	5.0	3.0	100	200	300	350	3.2	0.55	300	0.19	0.35	0.015	U5	
CM150DU-24H	1200	150	2.9	3.7	22	7.4	4.4	200	250	300	350	3.2	0.82	300	0.14	0.24	0.020	U2	
CM150E3U-24H	1200	150	2.9	3.7	22	7.4	4.4	200	250	300	350	3.2	0.82	300	0.14	0.24	0.020	U2	
CM200DU-24H	1200	200	2.9	3.7	30	10.5	6.0	200	300	300	350	3.2	1.10	300	0.11	0.18	0.020	U2	
CM300DU-24H	1200	300	2.9	3.7	45	15	9.0	200	300	350	350	3.2	1.65	300	0.11	0.18	0.010	U3	
CM400HU-24H	1200	400	2.9	3.7	60	21	12	250	350	350	350	3.2	2.20	300	0.06	0.09	0.020	U6	
CM600HU-24H	1200	600	2.9	3.7	90	31.5	18	300	700	450	350	3.2	3.30	300	0.04	0.06	0.015	U7	

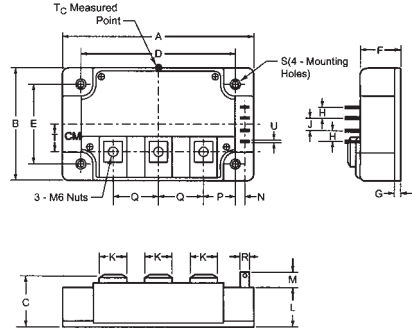
1.07 3rd Generation Standard IGBT Modules (U-Series)

Package U1



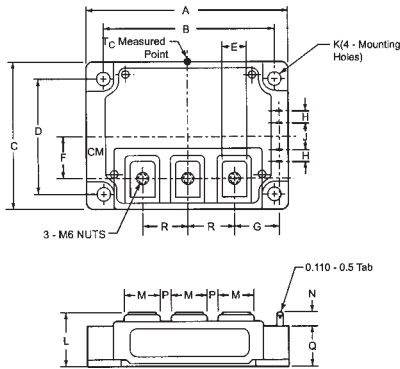
Dimensions	Inches	Millimeters	Dimensions	Inches	Millimeters
A	2.83	72.0	M	0.74	18.7
B	2.17±0.01	55±0.25	N	0.02	0.5
C	3.58	91.0	P	1.55	39.3
D	2.91±0.01	74.0±0.25	Q	0.63	16.0
E	0.43	11.0	R	0.57	14.4
F	0.79	20.0	S	0.22 Dia.	5.5 Dia.
G	0.69	17.5	T	0.32	8.1
H	0.75	19.1	U	1.02	26.0
J	0.39	10.0	V	0.59	15.0
K	0.41	10.5	W	0.20	5.0
L	0.05	1.25	X	1.61	41.0

Package U2



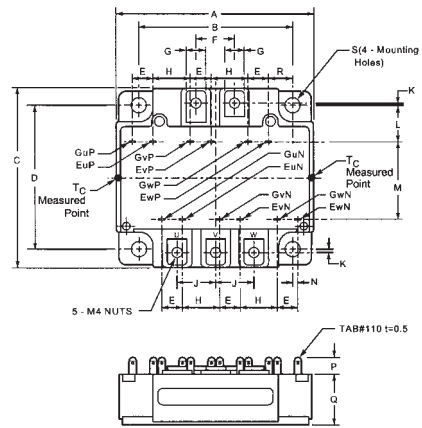
Dimensions	Inches	Millimeters
A	4.25	108.0
B	2.44	62.0
C	1.14±0.04/-0.02	29±1.0/-0.5
D	3.66±0.01	93.0±0.25
E	1.88±0.01	48.0±0.25
F	0.87	22.0
G	0.16	4.0
H	0.24	6.0
J	0.59	15.0
K	0.71	18.0
L	0.67	22.0
M	0.33	8.5
N	0.10	2.5
P	0.85	21.5
Q	0.98	25.0
R	0.11	2.8
S	0.25 Dia.	6.5 Dia.
T	0.6	15.15

Package U3



Dimensions	Inches	Millimeters
A	4.33	110.0
B	3.66±0.01	93.0±0.25
C	3.15	80.0
D	2.44±0.01	62.0±0.25
E	0.55	14.0
F	0.86	21.75
G	0.94	24.0
H	0.24	6.0
J	0.59	15.0
K	0.26 Dia.	6.5 Dia.
L	1.14±0.04/-0.02	29±1.0/-0.5
M	0.71	18.0
N	0.33	8.5
P	0.28	7.0
Q	0.83	21.0
R	0.98	25.0

Package U4

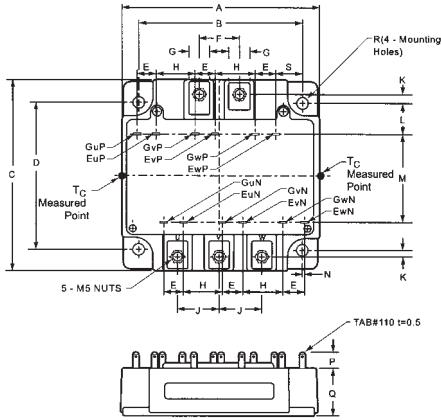


Dimensions	Inches	Millimeters
A	4.02	102.0
B	3.15±0.01	80.0±0.25
C	3.58	91.0
D	2.91±0.01	74.0±0.25
E	0.43	11.0
F	0.79	20.0
G	0.39	10.0
H	0.75	19.1
J	0.79	20.0
K	0.05	1.25
L	0.74	18.7
M	1.55	39.3
N	0.12	3.05
P	0.32	8.1
Q	1.02	26.0
R	0.47	11.85
S	0.22 Dia.	5.5 Dia.

1.07 3rd Generation Standard IGBT Modules (U-Series)

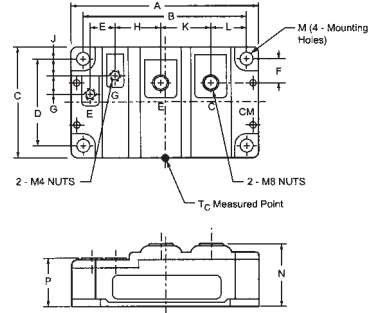


Package U5



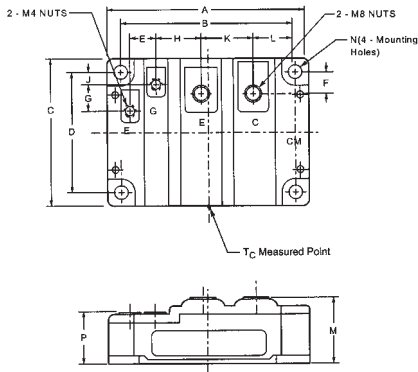
Dimensions	Inches	Millimeters
A	4.21	107.0
B	3.54±0.01	90.0±0.25
C	4.02	102.0
D	3.15±0.01	80.0±0.25
E	0.43	11.0
F	0.91	23.0
G	0.47	12.0
H	0.85	21.7
J	0.91	23.0
K	0.15	3.75
L	0.67	17.0
M	1.91	48.5
N	0.03	0.8
P	0.32	8.1
Q	1.02	26.0
R	0.22 Dia.	5.5 Dia.
S	0.57	14.4

Package U6



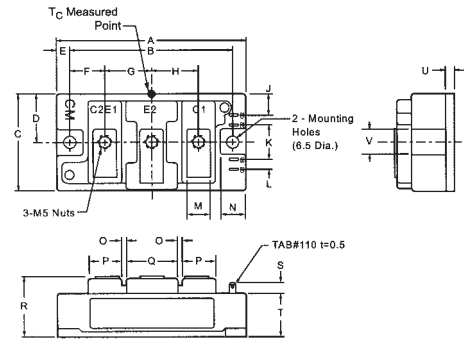
Dimensions	Inches	Millimeters
A	4.21	107.0
B	3.66±0.01	93.0±0.25
C	2.44	62.0
D	1.89±0.01	48.0±0.25
E	0.53	13.5
F	0.49	12.55
G	0.39	10.0
H	1.02	26.0
J	0.37	9.5
K	1.14	29.0
L	0.81	20.5
M	0.26 Dia.	6.5 Dia.
N	1.34±0.04/-0.02	34±1.0/-0.5
P	1.02±0.04/-0.02	26±1.0/-0.5

Package U7



Dimensions	Inches	Millimeters
A	4.33	110.0
B	3.66±0.01	93.0±0.25
C	3.15	80.0
D	2.44±0.01	62.0±0.25
E	0.53	13.5
F	0.37	9.5
G	0.57	14.5
H	0.96	24.5
J	0.22	5.5
K	1.14	29.0
L	0.85	21.5
M	1.34±0.04/-0.02	34±1.0/-0.5
N	0.26 Dia.	6.5 Dia.
P	1.02±0.04/-0.02	26±1.0/-0.5

Package U8



Dimensions	Inches	Millimeters
A	3.7	94.0
B	3.15±0.01	80.0±0.25
C	1.89	48.0
D	0.94	24.0
E	0.28	7.0
F	0.67	17.0
G	0.91	23.0
H	0.91	23.0
J	0.43	11.0
K	0.71	18.0
L	0.16	4.0
M	0.47	12.0
N	0.53	13.5
O	0.1	2.5
P	0.63	16.0
Q	0.98	25.0
R	1.18±0.04/-0.02	30.0±1.0/-0.5
S	0.3	7.5
T	0.83	21.2
U	0.16	4.0
V	0.51	13.0