FEATURES

Capacitance:0.1μF~330μF
Voltage:6V~50V
Operating temperature:
-55°C~+85°C for X5R/X7S
-55°C~+125°C for X7R
Tin/Lead solder plated (4% Pb minimum)
100% temperature cycling
100% accelerated steady state aging

APPLICATIONS

This series is designed for the COTS requirements, it's conditioned with MIL–PRF–49470 Group A testing, typical applications include decoupling, filtering.

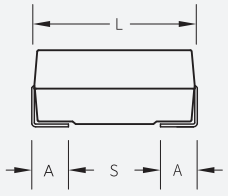
ORDERING INFORMATION

(G)	CT45	E	X7R	50V	106	M	T
Quality Grade	Series	Size Code	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Packaging
(G) : (G) LEVEL "S" : "S" LEVEL "J" : "J" LEVEL	CT45	A B C G D V	X7R X5R X5S	6V 10V 16V 25V 35V 50V 100V 200V 500V	First two digits represent significant figures, Third digit specifies number of zeros. Example: 106=10000000pF	K=±10% M=±20%	T=Bulk E=7"Reel

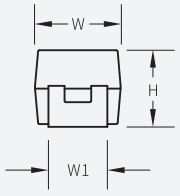
(G)	CT4502	T	X5R	25V	477	K	T
Quality Grade	Series	Size Code	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Packaging
(G) : (G) LEVEL "S" : "S" LEVEL "J" : "J" LEVEL	CT4502	E N J M Q T L	X7R X7S X5R X5S	6V 10V 16V 25V 35V 50V 100V 200V 500V 1KV 2KV	First two digits represent significant figures, Third digit specifies number of zeros. Example: 477=470000000pF	K=±10% M=±20%	T=Bulk

DIMENSIONS

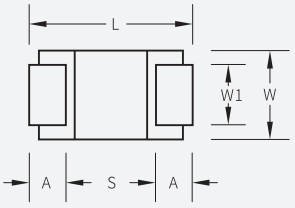
Unit: mm



Side View



End View



Bottom View

Size Code	L	W	H	W1	A
A	3.20±0.20	$1.60^{+0.20}_{-0.10}$	$1.60^{+0.25}_{-0.10}$	1.20±0.20	0.80±0.30
B	3.50±0.20	$2.80^{+0.20}_{-0.10}$	$1.90^{+0.40}_{-0.10}$	2.20±0.20	0.80±0.30
C	6.00±0.20	$3.20^{+0.20}_{-0.10}$	$2.60^{+0.25}_{-0.10}$	2.20±0.20	1.30±0.30
G	5.30±0.20	4.00±0.20	$6.90^{+0.30}_{-0.10}$	2.40±0.20	1.40±0.30
D	7.30±0.20	$4.30^{+0.20}_{-0.10}$	$2.90^{+0.25}_{-0.10}$	2.40±0.20	1.30±0.30
V	7.30±0.20	6.10±0.20	3.80±0.20	3.00±0.20	1.20±0.30
E	7.30±0.20	4.30±0.20	4.10±0.30	2.40±0.20	1.20±0.30
N	12.70±0.50	4.70±0.20	4.10±0.25	3.00±0.20	1.50±0.30
J	7.60±0.50	8.40±0.20	7.60±0.25	5.20±0.20	1.20±0.30
M	12.70±0.50	8.40±0.20	7.60±0.25	5.20±0.20	2.00±0.30
Q	12.70±0.50	12.40±0.50	7.60±0.25	9.20±0.50	2.00±0.30
T	20.50±0.50	8.40±0.20	7.60±0.25	5.20±0.20	2.00±0.30
L	30.50±0.50	9.90±0.20	8.50±0.25	6.60±0.20	3.00±0.30

ELECTRICAL CHARACTERISTICS

C_R Unit: μF

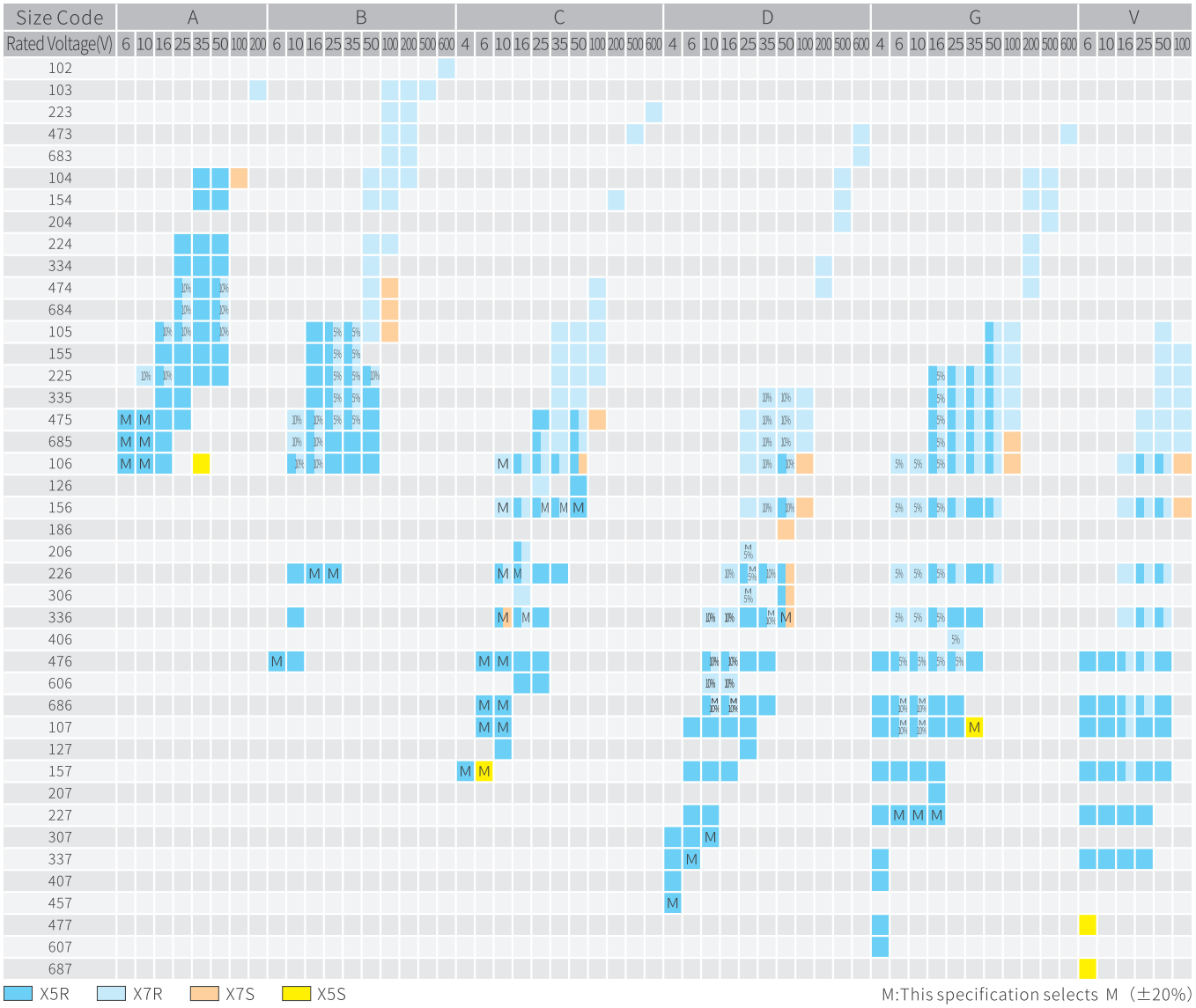
Characteristic	Loss Tangent		Dielectric Voltage	25°C Insulation Resistance
	CT45	CT4502		
X7R X7S	$U_R \leqslant 50V$ $tg\delta \leqslant 3.5\%$ $U_R > 50V$ $tg\delta \leqslant 2.5\%$ Side C/V: $U_R \leqslant 50V$ $tg\delta \leqslant 10\%$ $50V < U_R \leqslant 100V$ $tg\delta \leqslant 3.5\%$ $U_R > 100V$ $tg\delta \leqslant 2.5\%$	$U_R \leqslant 25V$ $tg\delta \leqslant 5.0\%$ $35V \leqslant U_R \leqslant 100V$ $tg\delta \leqslant 3.5\%$ $U_R > 100V$ $tg\delta \leqslant 2.5\%$ Side J/Q: $U_R \leqslant 10V$ $tg\delta \leqslant 10\%$ $16 \leqslant U_R < 50V$ $tg\delta \leqslant 5.0\%$ $50V \leqslant U_R \leqslant 100V$ $tg\delta \leqslant 3.5\%$ $U_R > 100V$ $tg\delta \leqslant 2.5\%$	$U_R \leqslant 250V$ $2.5U_R$ $250V < U_R < 500V$ $2U_R$ $500V \leqslant U_R < 1000V$ $1.5U_R$ $U_R \geqslant 1000V$ $1.2U_R$	$C_R < 0.1\mu F$ $IR \geqslant 4G\Omega$ $C_R \geqslant 0.1\mu F$ $IR \geqslant \frac{100}{C_R} M\Omega$
X5R X5S	$U_R \leqslant 50V$ $tg\delta \leqslant 10\%$ $U_R = 100V$ $tg\delta \leqslant 3.5\%$ $U_R > 100V$ $tg\delta \leqslant 2.5\%$			

TEST LEVEL

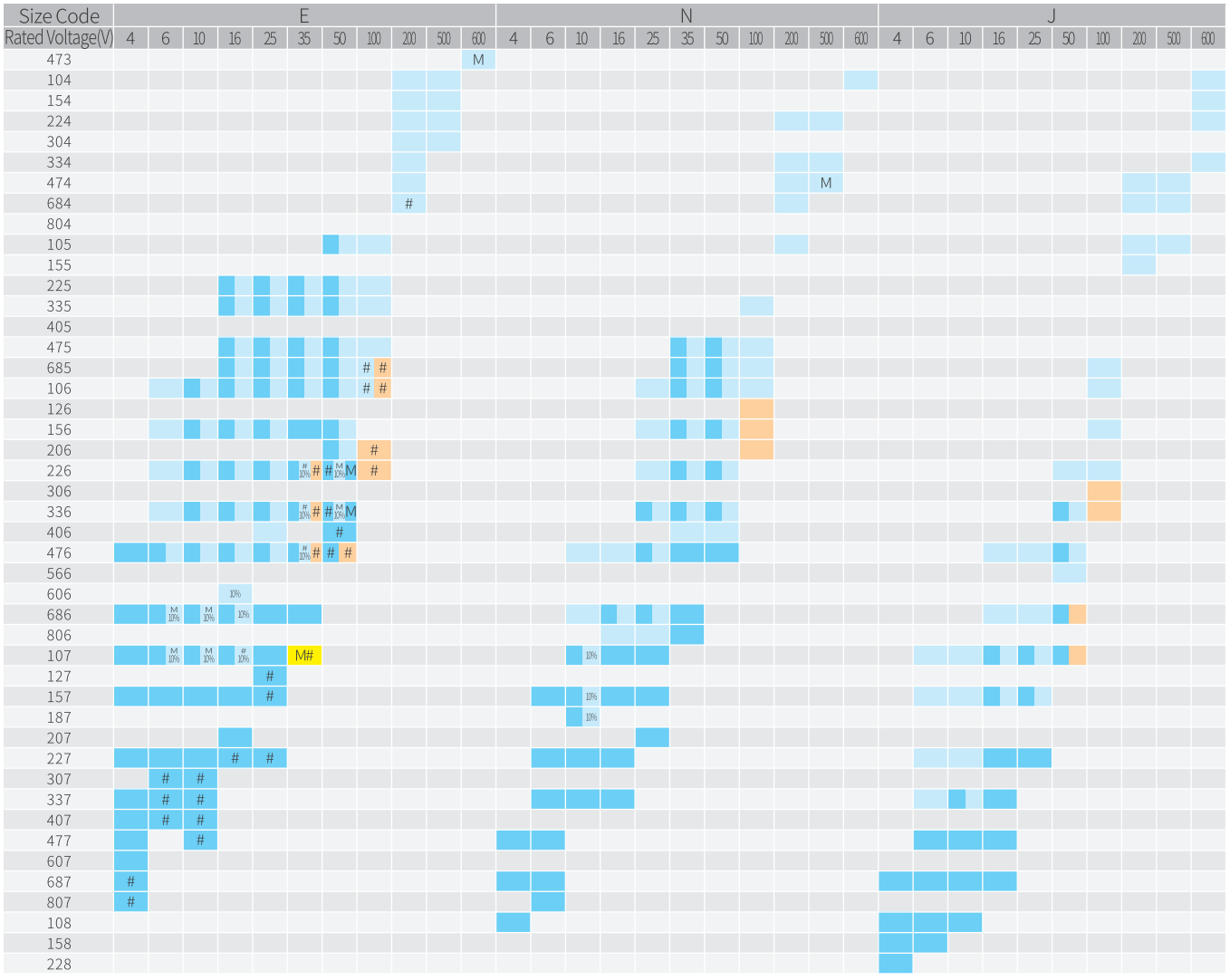
"J" LEVEL(Level A)	"S" LEVEL(Level B)	(G) LEVEL(Level C)
Temperature cycling	Temperature cycling	Temperature cycling
Accelerated steady state aging @48h	Accelerated steady state aging @96h	Accelerated steady state aging @96h
Solderability	Solderability	Resistance to moisture
		Terminal strength
		Solderability
		Resistance to soldering heat
		Steeping
		Bending strength

CAPACITANCE AND RATED VOLTAGE RANGE

CT45



CT4502



M(±20%)Tolerance is recommended for this specification
Size code（mm）:L（7.30±0.20）×W（4.50±0.30）×H（4.60±0.50）

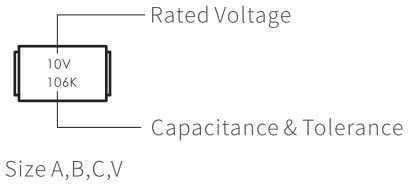
CT4502

M(±20%)Tolerance is recommended for this specification

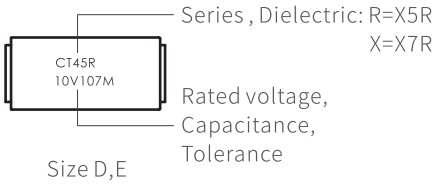
Size code（mm）:L（7.30±0.20）×W（4.50±0.30）×H（4.60±0.50）

MARKING

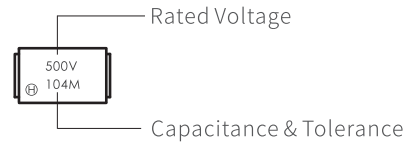
CT45



Size A,B,C,V

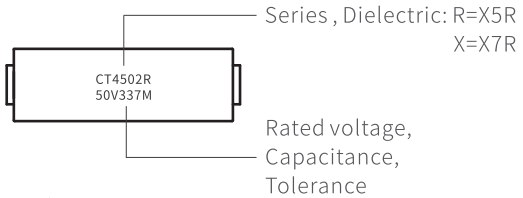


Size D,E



Size G

CT4502



Size E,N,J,M,T,Q,L