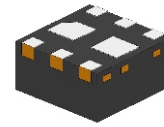


ACMSA06CN2N7002K-HF

**N-Channel
RoHS Device
Halogen Free**



Features

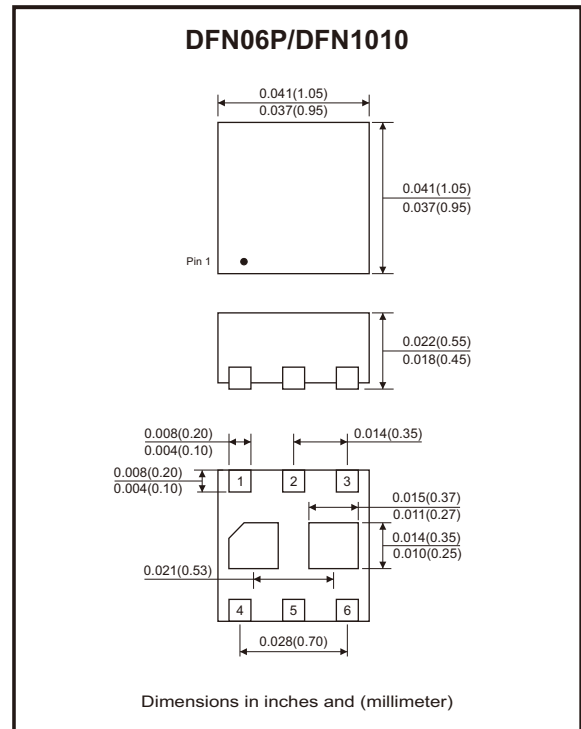
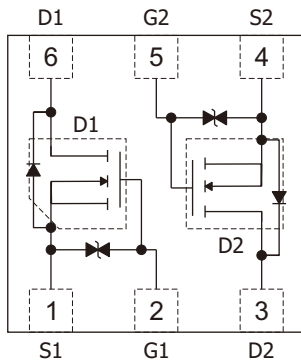
- Surface mount package.
- Reliable and rugged.
- ESD protection.
- AEC-Q101 Qualified & PPAP.

Mechanical data

- Case: DFN06P/DFN1010 package, molded plastic.
- Mounting position: Any.

Circuit Diagram

- G : Gate
- S : Source
- D : Drain



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V _{DS}	60	V
Gate-source voltage	V _{GS}	±20	V
Continuous drain current	I _D	300	mA
Power dissipation	P _D	350	mW
Thermal resistance, junction to ambient @T _A =25°C	R _{θJA}	320	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Static Electrical Characteristics						
Drain-source breakdown voltage	BV _{DSS}	V _{GS} = 0V, I _D = 250μA	60			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = 60V, V _{GS} = 0V			1	μA
Zero gate voltage drain current	I _{DSS}	V _{DS} = 48V, V _{GS} = 0V			1	μA
Gate leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±10	μA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.1		2.3	V
Drain source on-state resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 250mA		1.6	2.2	Ω
		V _{GS} = 4.5V, I _D = 250mA		1.8	3.0	
Drain forward voltage	V _{SD}	V _{GS} = 0V, I _S = 150mA	0.4		1.2	V
Forward transconductance	g _{FS}	V _{DS} = 10V, I _D = 200mA			1.0	S
Dynamic Characteristics						
Input capacitance	C _{iss}	V _{DS} = 10V, V _{GS} = 0V, f = 1MHz		28		pF
Output capacitance	C _{oss}			10		
Reverse transfer capacitance	C _{rss}			4		

Typical Rating and Characteristic Curves (ACMSA06CN2N7002K-HF)

Fig.1 - On-Region Characteristics

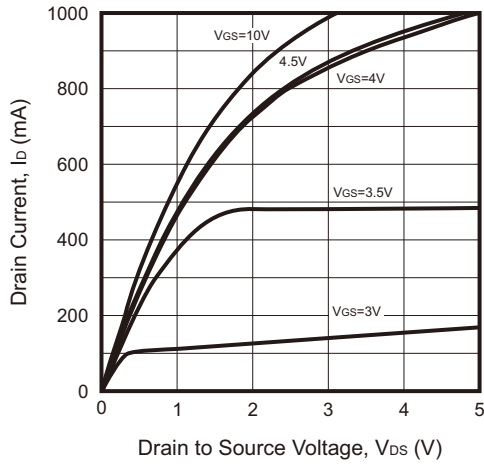


Fig.2 - Transfer Characteristics

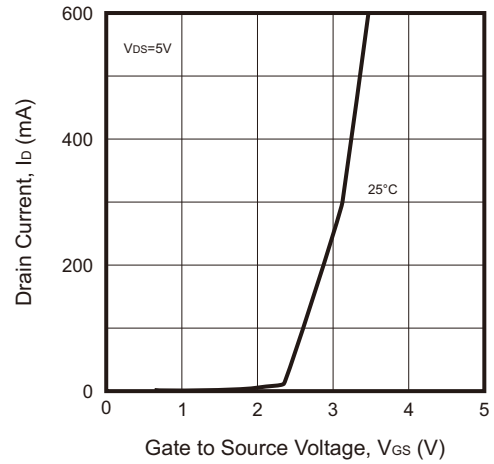


Fig.3 - On-Resistance vs. Drain Current Gate Voltage

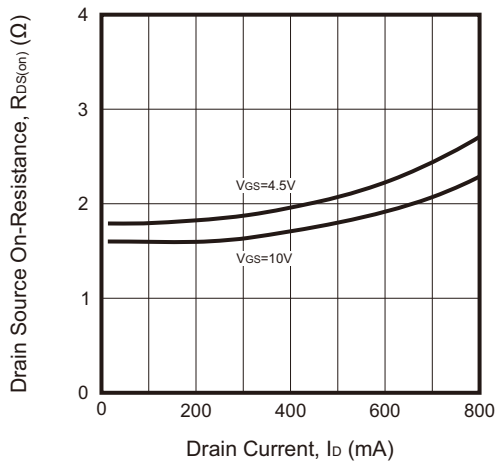


Fig.4 - On-Resistance Variation with Temperature

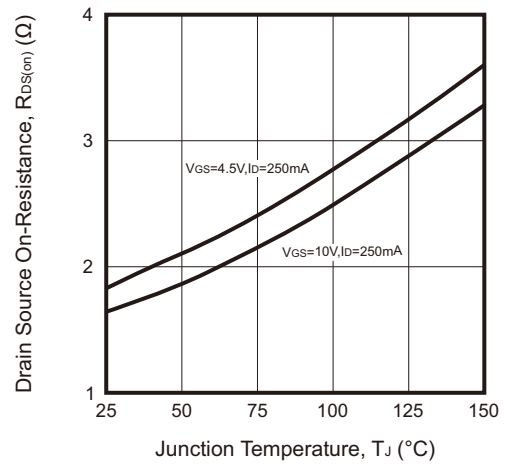


Fig.5 - On-Resistance vs. Gate Source Voltage

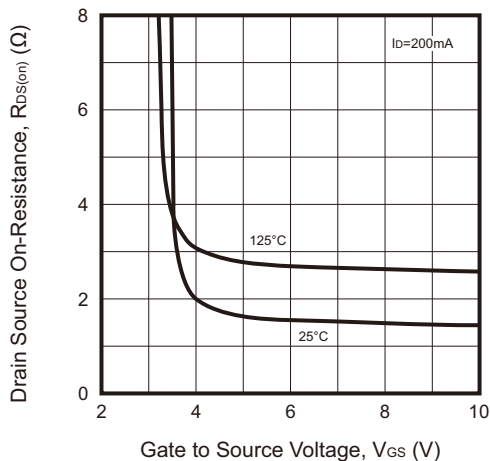
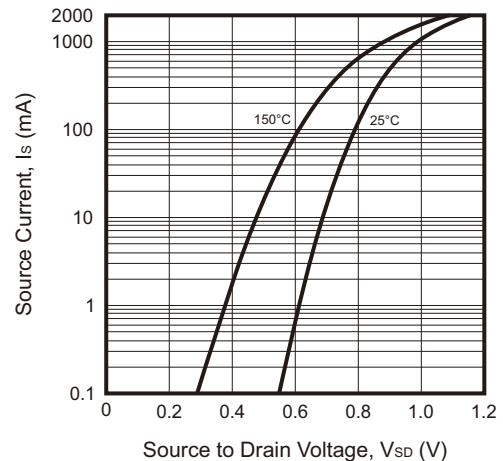


Fig.6 - Diode Forward Voltage vs. Current



Typical Rating and Characteristic Curves (ACMSA06CN2N7002K-HF)

Fig.7 - Gate Threshold Variation vs. Ambient Temperature

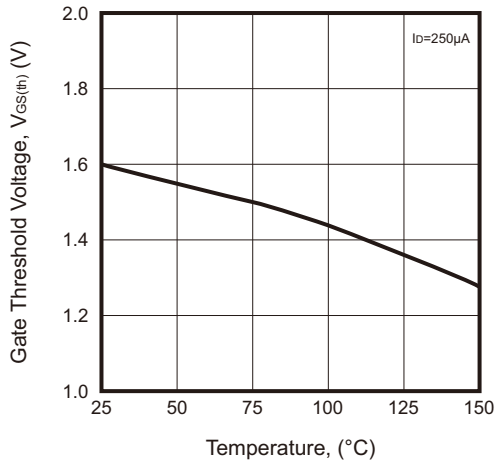


Fig.8 - Breakdown Voltage vs. Temperature

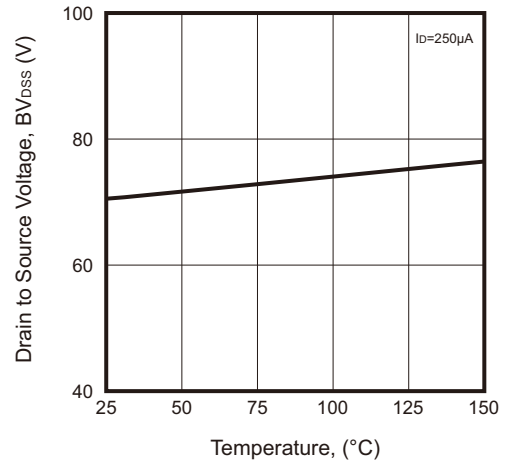
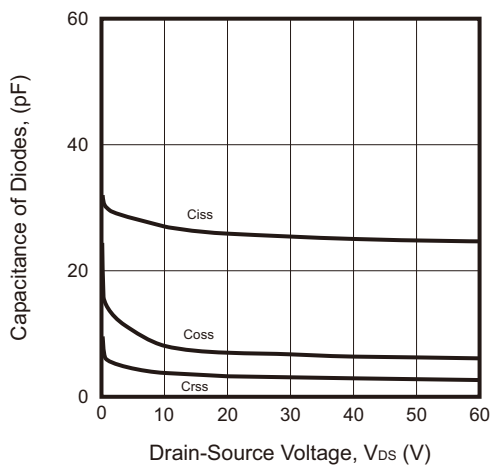
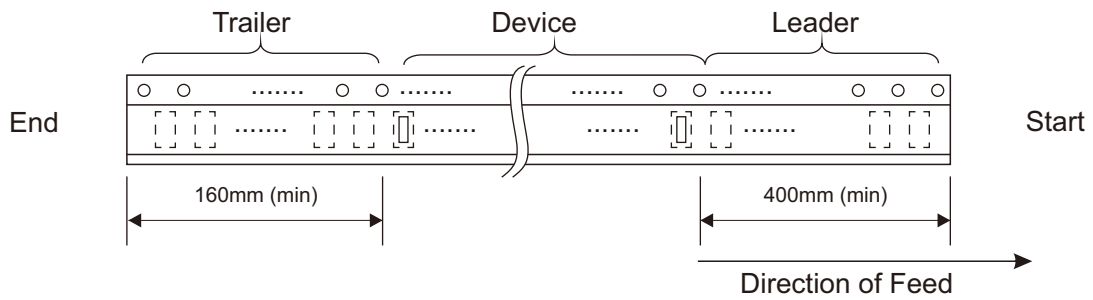
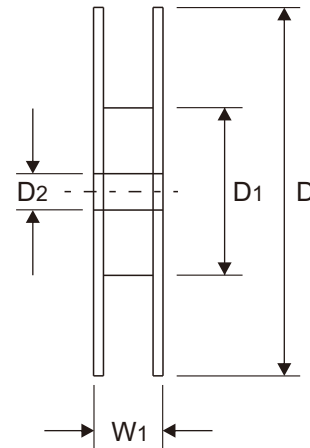
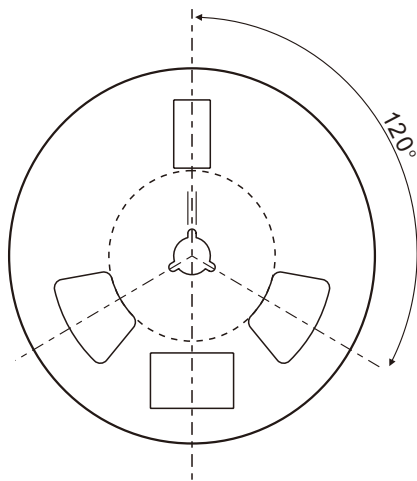
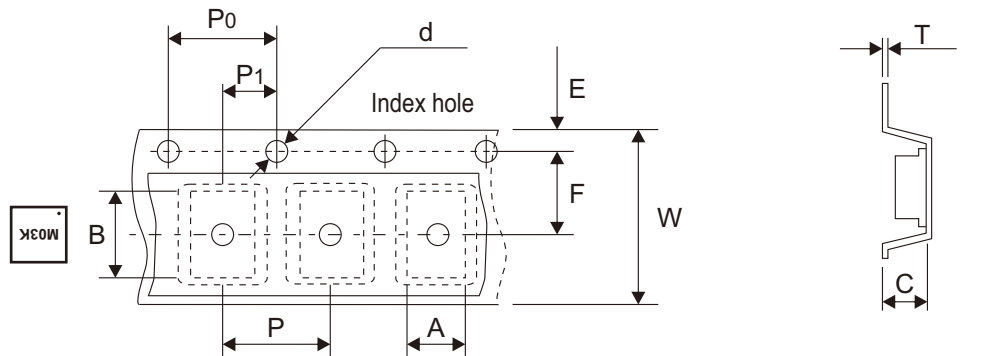


Fig.9 - Capacitance of Diodes



Reel Taping Specification



DFN06P/ DFN1010	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.13 ± 0.05	1.13 ± 0.05	0.65 ± 0.05	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.044 ± 0.002	0.044 ± 0.002	0.026 ± 0.002	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

DFN06P/ DFN1010	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	8.00 + 0.30 - 0.10	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 + 0.012 - 0.001	0.472 + 0.020 - 0.000

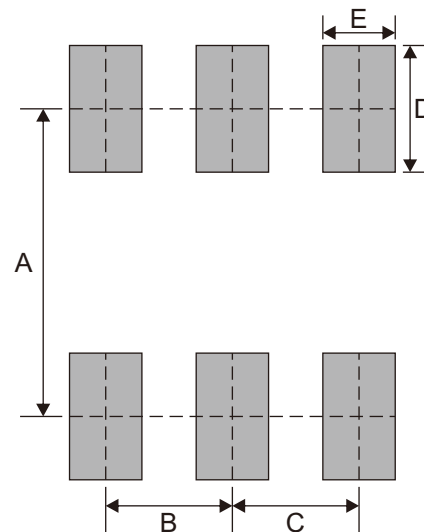
Marking Code

Part Number	Marking Code
ACMSA06CN2N7002K-HF	.M03K



Suggested P.C.B. PAD Layout

SIZE	DFN06P /DFN1010	
	(mm)	(inch)
A	0.85	0.033
B	0.35	0.014
C	0.35	0.014
D	0.35	0.014
E	0.20	0.008



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DFN06P /DFN1010	5,000	7