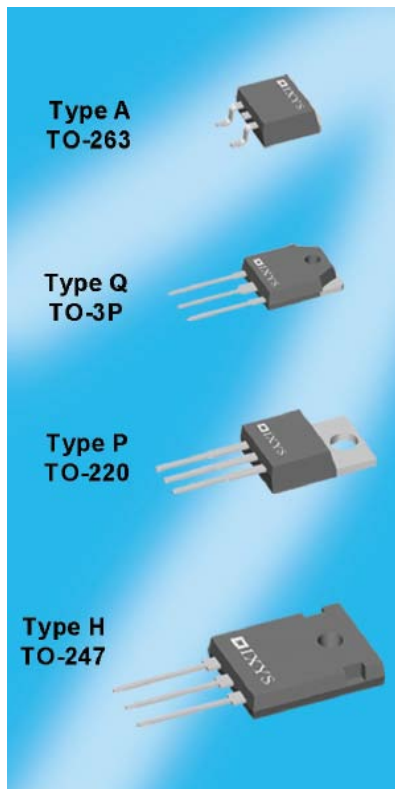


## TrenchP™ P-Channel Power MOSFETs

### IXYS introduces Trench P-Channel Power MOSFETs



Milpitas, CA. - IXYS Corporation (NASDAQ:IXYS) announces the introduction of -50V to -150V TrenchP™ P-Channel Power MOSFETs with 30% lower device on-resistance per unit area than best-competing P-Channel devices on the market. This new family of P-Channel devices capitalize on benefits derived from IXYS' advanced trench cell technology commonly implemented in their portfolio of industry recognized power devices. They feature an ultra low on-resistance ( $R_{dson}$ ) and gate charge ( $Q_g$ ), minimizing conduction and switching losses, while promoting improved operating and thermal efficiencies.

These devices are ideal for 'high side' switching applications where a simple drive circuit referenced to ground can be employed, bypassing additional 'high side' driver circuitry commonly involved when using an N-Channel MOSFET. This enables designers to reduce component count, thereby improving drive circuit simplicity and over-all component cost structure. Furthermore, it allows for the design of a complementary power output stage with a corresponding IXYS N-Channel MOSFET, for a power half bridge stage with a simple drive circuit.

The **IXTP32P05T** (-50V, -32A,  $Q_g = 46\text{nC}$ ,  $R_{dson} = 36\text{m}\Omega$ ) and **IXTP28P065T** (-65V, -28A,  $Q_g = 46\text{nC}$ ,  $R_{dson} = 45\text{m}\Omega$ ) are some examples that illustrate the superior electrical and thermal efficiencies presented by the TrenchP™ P-Channel Power MOSFET family. Additional features include an extended forward bias safe operating area (FBSOA), fast switching performance, and excellent avalanche capabilities.

These products are available to support applications requiring voltage and current ratings from -50V to -150V and -18A to -140A. Package options include the standard low cost through-hole TO-220 and surface mount TO-263 package. Common applications that will greatly benefit from these devices include high side or load switching, DC/DC converters, high current regulators, DC Choppers, CMOS high power amplifiers, push-pull amplifiers, and power solid state relays.

Additional product information may be obtained by visiting IXYS website at <http://www.ixys.com>, or by contacting the company directly. For applications regarding the -100V to -600V range, refer to IXYS' **PolarP™** P-Channel Power MOSFET family for your medium to high voltage solutions.

## TrenchP™ Power MOSFET Summary Table

Part Number	V <sub>dss</sub> (max) V	I <sub>d</sub> @ T <sub>c</sub> =25°C (A)	R <sub>ds(on)</sub> @ T <sub>c</sub> =25°C (Ω)	C <sub>iss</sub> (pF) typ	Q <sub>g</sub> (nC) typ	t <sub>rr</sub> @ T <sub>c</sub> = 25°C (ns)	R <sub>(th)JC</sub> (°C/W)	P <sub>d</sub> (W)	Package
IXTA32P05T	-50	-32	0.036	1975	46	26	1.50	83	TO-263
IXTP32P05T	-50	-32	0.036	1975	46	26	1.50	83	TO-220
IXTA140P05T	-50	-140	0.008	13500	200	53	0.42	298	TO-263
IXTP140P05T	-50	-140	0.008	13500	200	53	0.42	298	TO-220
IXTH140P05T	-50	-140	0.008	13500	200	53	0.42	298	TO-247
IXTA28P065T	-65	-28	0.045	2030	46	31	1.50	83	TO-263
IXTP28P065T	-65	-28	0.045	2030	46	31	1.50	83	TO-220
IXTA120P065T	-65	-120	0.010	13200	185	53	0.42	298	TO-263
IXTP120P065T	-65	-120	0.010	13200	185	53	0.42	298	TO-220
IXTH120P065T	-65	-120	0.010	13200	185	53	0.42	298	TO-247
IXTA24P085T	-85	-24	0.065	2090	41	40	1.50	83	TO-263
IXTP24P085T	-85	-24	0.065	2090	41	40	1.50	83	TO-220
IXTA96P085T	-85	-96	0.013	13100	180	55	0.42	298	TO-263
IXTP96P085T	-85	-96	0.013	13100	180	55	0.42	298	TO-220
IXTH96P085T	-85	-96	0.013	13100	180	55	0.42	298	TO-247
IXTA18P10T	-100	-18	0.120	2100	39	62	1.50	83	TO-263
IXTP18P10T	-100	-18	0.120	2100	39	62	1.50	83	TO-220
IXTA76P10T	-100	-76	0.024	13700	197	70	0.42	298	TO-263
IXTP76P10T	-100	-76	0.024	13700	197	70	0.42	298	TO-220
IXTH76P10T	-100	-76	0.024	13700	197	70	0.42	298	TO-247
IXTA44P15T	-150	-44	0.065	13400	175	140	0.42	298	TO-263
IXTP44P15T	-150	-44	0.065	13400	175	140	0.42	298	TO-220
IXTH44P15T	-150	-44	0.065	13400	175	140	0.42	298	TO-247
IXTQ44P15T	-150	-44	0.065	13400	175	140	0.42	298	TO-3P

### [IXYS TrenchP™ P-Channel MOSFET Parametric Data and Datasheets](#)

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